
TIME AND CHANGE

As Ordering Principles for Urban Design: An Exploration

by

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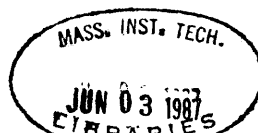
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ABSTRACT

Urban design proposals traditionally have tended to deal with images of a final stable state in the environment. A need for acceptance and display of the process of change which, though present in all cities, is absent from most conceptions, is essential. To the extent that environmental change is inevitable, we should at least try to make sure that it is a guided process.

The main intention will be to understand the nature of change and its measurable time by exploring ways in which a portion of Boston can remain flexible and receptive to individual and group energy conducive to change. Ways of managing future changes will involve the reconception of the study area as a spatiotemporal setting based in a time-change related program, thus testing the effectiveness and relevance of time and change as guiding principles for urban design. The setting will be a block in Boston's South End, where the Boston Center for the Arts is located.

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DEDICATION

TO: MY MOTHER, LIDIA IZAS DE ROSALES

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INTRODUCTION

Several theoreticians have thought about the consequences and qualities of a changing environment, among them Lynch and Tuan. Both have a positive attitude towards the creation of vigorous and stimulating environments. Based on their theories, the present investigation intends to explore how change can be managed in ways that are meant to lead to more desirable states over periods of time. The relevance of this task is expressed by Lynch:

To the extent that change is inevitable, we should at least make sure that it is a human process and that it does not lead to our destruction. Our real task is not to prevent the world from changing but to cause it to change in a growth-conducive and life-enhancing direction.

An important premise in this investigation will be that change is necessary and desirable. A static world may at first seem less demanding and conducive to a feeling of detachment and peace, but the lack of dynamism, the silence, and the severe loss of information might induce responses such as anxiety, dissociation, and withdrawal.

Not only do time and change play an important role in the process by which environments provide stimulation, but time and change are also sources of knowledge. Furthermore, a managed pattern of happening or change that occurs over time can become a symbol that characterizes the urban space where it occurs.

Urban spaces should be designed taking into consideration the creation and distribution of qualities in time and space. A sense of place for some urban spaces may depend not on certain "timeless" architectural features but on the activities and other changing qualities of that space. When remembering a place, people seem to be more interested in dynamic rather than static images, in activities that unfold in time rather than in objects positioned in space. This type of environmental image is both spatial and temporal. The image is the result of experiencing and perceiving a space not only in terms of the relative location of physical elements, but also in terms of live human activities and events. Other authors, like Fritz Steele, have shared this thought:

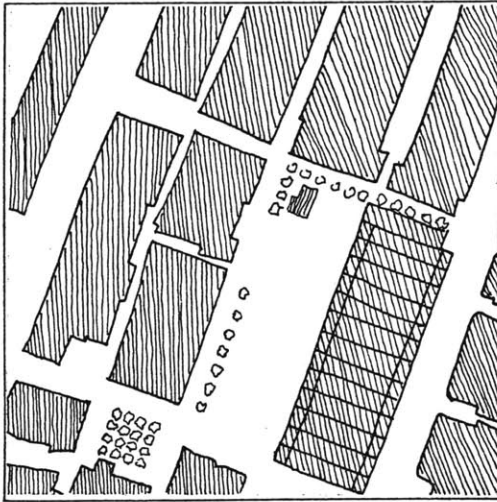
Good rich images generate appropriate expectations about use, fantasies that enhance the place, experience, and stimulation of new alternatives for work and/or pleasure in the setting.

In addition, Lynch describes settings with properties that contribute to good images of place as follows: "They are vivid and engaging, and they allow further exploration and development." Our initial attraction to a particular place results partially from the creation of this type of environmental image. A place that exemplifies the essential components that help form a spatio-temporal image is the Beaubourg Square in Paris. When the public remembers this space it can not isolate the spatial configuration of the square from the exhibitions, concerts, or artistic performances that take place as part of a continuous changing pattern.

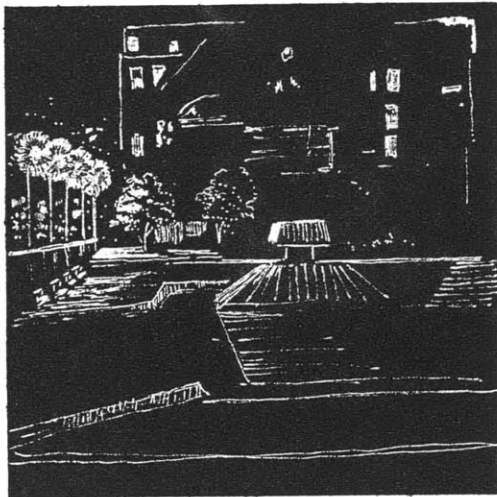


Beaubourg Square in Paris

Some urban spaces, unlike the Beaubourg square which possesses an integrated image, seem rather deserted and abandoned without the activities that take place in them. The reason for this quality of desertedness may be partially attributable to the fact that future changes are not foreseen. These kinds of space are usually designed with a certain range of activities in mind, some of which may never actually occur. Copley Square in Boston is an example of an open public space that has never been used in the ways designers expected. This lack of activities is partially attributable to the lack of environmental moderating



Beaubourg square in Paris, plan



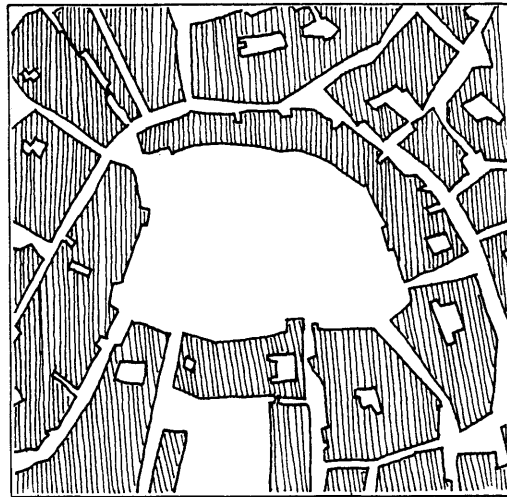
Copley square at night

elements, poor night illumination, but mainly because this urban space is just another "multi-use" public open space with an undefined timing framework for selected activities.

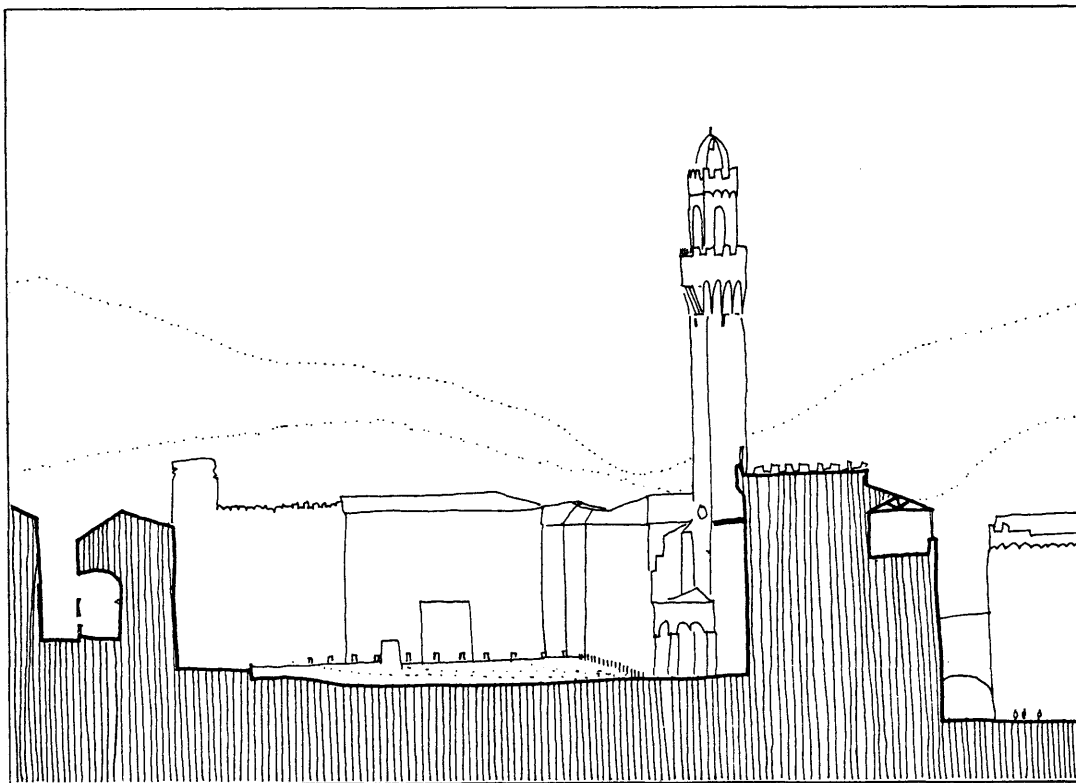
It may be possible not only to allocate physical boundaries in a design proposal of an urban space, but also to design and plan a set of future changes that eventually could form part of its spatiotemporal boundaries. The greatest flexibility in design would be provided if control over the urban space and its activities was centralized in the hands of the designers. An example of this

condition occurs every year in Siena, Italy. La Festa del Palio is a key event sponsored by the authorities of Siena with the help and participation of the community. The Siena festival activities are enhanced not only because there is a

Piazza del Campo



Section through the Piazza del Campo



well-considered centralized plan for the event but also because of the spatial configuration of the Piazza del Campo during the festival. The whole square slopes gradually to the center and to the base of the Palazzo Pubblico like an amphitheater. Furthermore, converging lines marked in the pavement give the illusion that the slope of the plaza is steeper than it actually is, making people feel elevated relative to the events taking place in the plaza and as if they were in a better position to observe them. Consequently, a spectacular process of change, the Festa del Palio, can be appreciated in all its splendor.

Lynch seems to be concerned with the creation of spatio-temporal images by means of changing processes in a setting. On the other hand, Tuan is concerned with the existence of urban spaces with limited sensory ambience where people feel somewhat detached and isolated, because they are perceived as distant and interactions between space and users do not take place. In addition to being sources of information and stimuli, environmental changes are key elements that create rich environments where perceptual experiences will tend to be complete, continuous, and connected. According to Tuan, a sense of place consists of:

Experiences, a unique blend of sights, sounds and smells, a unique harmony of natural and artificial rhythms, such as times of sunrise and sunset, or work and play.

An example that illustrates both Tuan's and Lynch's concerns is the use of solar clocks in public spaces. In terms of an information process, the shadows produced by the sun would not only indicate the time of day but also transitions towards different seasons as shadows become longer because of differences in sunlight angles. In addition, the pattern of light and shadow will stimulate the senses of sight and touch.

Change is the process by which the future intrudes into our lives and it is

important to look at it closely. This investigation will try to go a step further than the philosophical level at which change has been analyzed by Lynch and Tuan. The main intention is to explore how time and change can act as guiding principles for urban design, based on the notion that urban spaces should be partially created with spatiotemporal images in mind.

Subsequent sections will explore the following questions: How can the process of change be managed and enhanced? Which elements, such as building surroundings, open spaces, and sidewalks, can be manipulated to allow for the creation of spatiotemporal images? What is the relation between change and its measurement, time, in evoking the reality of a place? To what extent are these general principles applicable in designing different kinds of public spaces?

The belief that the guiding concepts of time and change must be explained in detail if we are to use them to infuse the creation of urban spaces with a sense of place, has inspired both the theoretical and practical aspects of this thesis. The research will focus on an outdoor public space in Boston. The first sections of this thesis develop the intellectual framework of spatiotemporal design. The case study is analyzed and evaluated in later sections. In conclusion, an attempt will be made to generate principles of managing the time-change parameters of public space design.

1. CHANGES

Before choosing which process of change to use or display in an outdoor public space, we need to imagine a multiplicity of visions and images of potential tomorrows, of future changes. Before it is possible to decide rationally which pathways to take, we must first ascertain which are possible. Multiplying our images of possible "change and time"-related futures is important, but these images need to be organized into a structured framework. In the spirit of these remarks, Don Schon writes:

There are two basic strategies for thinking about the future. One of them is to pay attention to a great range of dimensions or features of the thing you are talking about and on the basis of those different features to identify alternative scenarios. The doctrine is that if you can entertain alternative scenarios of what the future may be, you can thereby prepare yourself better to confront it.

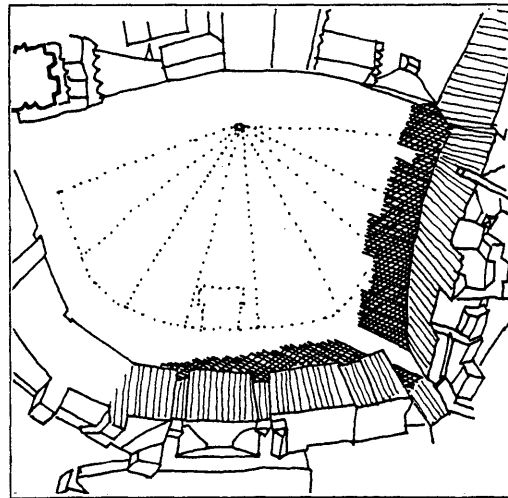
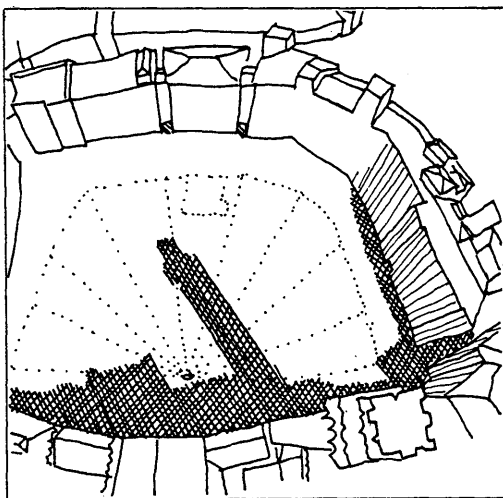
When reflecting on the concept of change, the need to differentiate between the different kinds of changes that could or would take place in an environment might be a way to structure an intellectual framework that would enable a design

process based on change and time. Changes can be classified in different typologies. I shall start from the general to the particular. First, a differentiation can be established in terms of the certainty of occurrence. Some environmental changes will happen independently of the configuration and nature of an urban space and its context. Neither individual desires nor the will of the users will impede their occurrence. To this category belong, among other types of changes, the natural and atmospheric cycles, e.g., day and night, differentiated seasons, and changing microclimates.

Other types of changes are probabilistic. They are not a given. To this category belong all man-made interventions, e.g., transformation of buildings and spaces, and changing activities and patterns of use.

Ways of managing both processes may require a different attitude towards them. It might be wise to enhance and display those types of change that are inevitable. In this way they could be better accommodated and enjoyed rather than only accepted. This notion might be more relevant for places with extremes of weather and changing seasons. Actually, the second process can affect the

Shadow patterns in the Piazza del Campo



impact of the first process insofar as a building can shade (+) or shadow (–) an open area. This effect occurs during the day in the Piazza del Campo. The effect is dramatic due to the presence of a tower.

On the other hand, the latter type of changes, because of the uncertainty of their occurrence in the future, might imply the need to first try to foresee them and then partially shape them. It is obvious that the complexities of this process of future uncertain changes can not be imagined by a single mind. Who will be in control of the spaces and their contexts is a key factor that will dictate the types of changes that will occur. A way to manage this process might be to speculate on their occurrence by means of envisioning different alternative scenarios. In that way, their implications and ways to confront them could be understood and foreseen.

The latter differentiation has been established in terms of how inevitable change could be, but that is not the only way that changes could be classified. Further types of differences will be placed within these two broad categories. The intention is not to find out all the possible types of environmental changes that ought to be in any particular urban space. A special concern will be given to the search of change–time processes to take place in the context of open public spaces. It is more important to find categories by which different processes could be classified and thus create a framework where an extended range of types might fit. In addition, beyond the issues of inevitability or probability of occurrence, change could be classified by, for example, extent of intrusion on or conflict between alternative activities or uses.

THE INEVITABLE

Some changes are inevitable and will occur, among them natural and atmospheric cycles, because of their tendency to be of a predictable quality in their recurrence. Although able dramatically to affect the perception of a place and the creation of spatiotemporal images, they can not be prevented. In consequence, they should rather be managed in a way that would allow for their enjoyment. The periodic nature of their occurrence permits the planning ahead of several ways in which they could be managed or displayed.

Places can be given a particular look at a particular time. Environments can make us aware of being part of a flow of natural events. Besides, the display of these inevitable changes could serve as an advance source of information that could induce exploration of future alternatives and suggest new modes of action.

Seasonal transformations are ineluctable as part of a yearly cycle. Seasons could be displayed in a direct way, in a manner similar to the way they occur.

To be able to treat them in this way, we must note the presence of elements that are transformed over a year of seasonal changes in order to perceive a changing process through their transformation. The use of deciduous trees and vegetation, running water, changing materials, sun and moonlight, wind, snow, and rain among others could be combined and exhibited in an integrated, spatiotemporally related display process. Parks are ideal public spaces for the creative management and enhancement of this type of change and time-related process.

Added to the fact that these types of processes can serve as sources of information, seasonal transformations might also stir our emotions through stimulation of our senses.

Some of the parks in Olmstead's park system exemplify this quality of seasonal change integrated as display. In these parks the use of both perennial

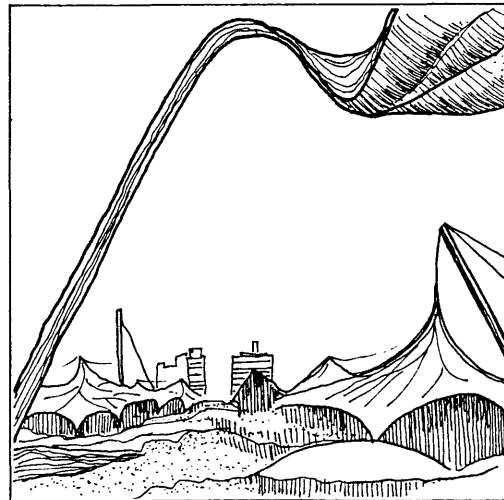
Olmstead's landscape design

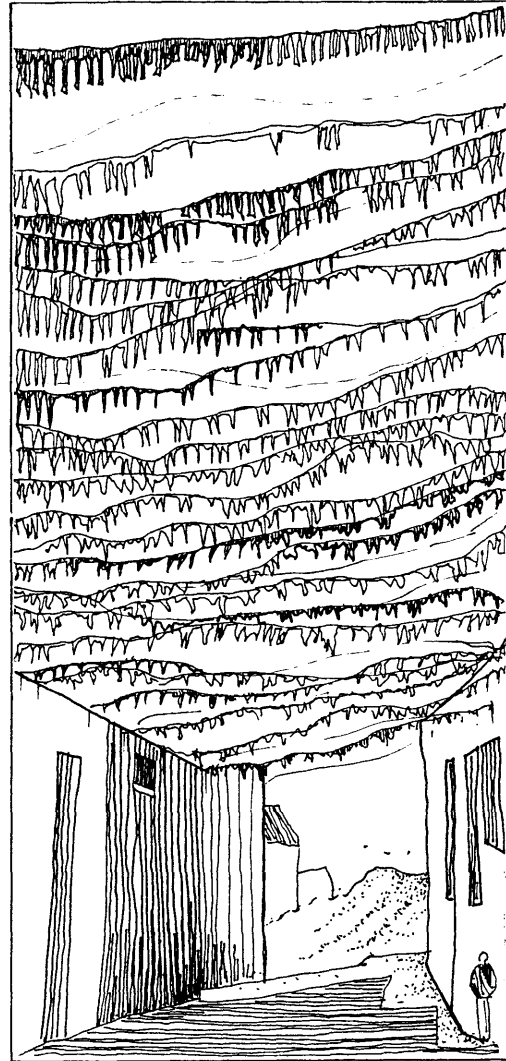


and deciduous trees planted in certain positions in the landscape produce a special effect. Trees are placed in ways that allow for discovering different scenes and types of landscapes as winter approaches. As deciduous trees change over time they will contrast with the stable colors and configurations of perennial ones. When positioned in subsequent layers or screens, the landscape will change considerably as leaves fall down. The perennial ones will become increasingly apparent and an effect of transparency will become evident in the landscape. The effect in this case would be mainly visual, but that is not the only way our senses could be stimulated. Another device often used by Olmstead was the mixture of planting that provided a succession of changing fragrances throughout

An example of an art movement where a variety of inevitable types of change—time related processes are enhanced is environment art. Traditionally this art movement has relied on the use of the wind as a transformational force that creates movement. Although this movement formally started at the beginning of the 20th century, some of the ideas used by environmental artists are rooted in the traditions of several cultures. The use of the wind and its effects has

Environmental art, Munich, Germany





Wind effect, Mallorca, Spain

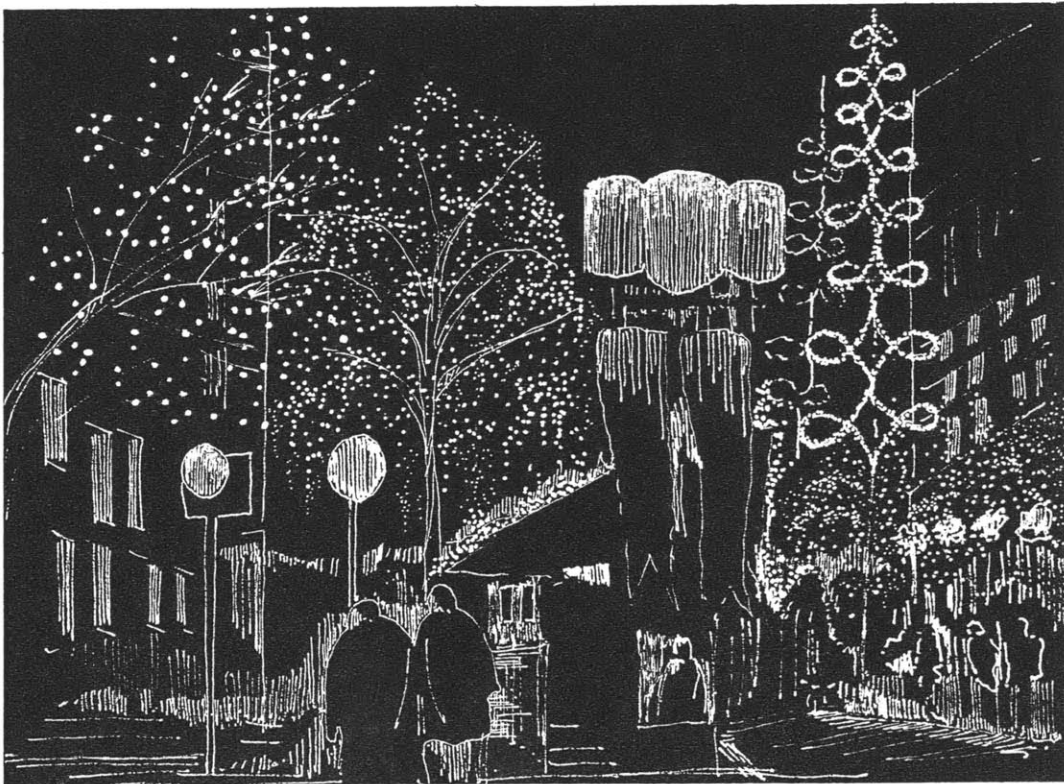
fascinated us for centuries. The wind by itself is a natural force with an intrinsic potential for inducing change–time transformations.

Another consideration for managing or enhancing this type of inevitable process is related to the fact that, although seasonal changes are certain to occur, there is lack of control over their timing. For example, we generally can not rely on these processes for displays that are intended to occur at a certain hour or on a certain day. The sunlight might not come through a group of clouds and it could suddenly start raining. Besides, seasonal changes are of

relatively long-term duration. These remarks would not always be applicable for all the types of change included in a category of inevitable types. For example, the cycles of day and night are an exception. This type of change process is certain in its occurrence, but also predictable in its timing and in the way it will unfold in time.

Usually public open spaces tend to be envisioned as usable only during the day. The night, as a setting, offers innumerable opportunities for the exhibition of change; many of these effects could never take place during the day. Usually these change processes are of man-made origin and in consequence not of an inevitable condition as are the ones produced by natural forces. An example is the artificial illumination patterns designed for streets and plazas like the ones that border the Nicolet Mall in Minneapolis. It is important to make a public

Nicolet Mall in Minneapolis



space attractive both during the day and night, because, if that is the case, day and night people can coexist and also change into another time pattern if desired.

Environmental changes produced by natural forces can not be enjoyed or appreciated all the time. Sometimes, to be able to appreciate them, protection for certain extremes in temperature or wind-chill becomes a need. This is applicable to climate like that of Boston. It is not only necessary to provide arrangements that amplify or enhance naturally changing transformation, but also to be able to perceive them comfortably, e.g., by means of shelter or protective elements.

Natural cycles are not permanent; for example, seasons are quite distinct and changeable. This might indicate that perhaps some elements that would contribute to the enhancement of summer, like running water, would not have the same effect in winter. There are two ways to tackle this problem. One would be the use of fixed elements that could be transformed by the different natural cycles. Another way would be to use elements of a more ephemeral and flexible quality. For example, it could be possible to remove trees and planting materials from an area where their color and shade quality would not be appreciated in the winter and substitute them with a winter-related activity area. A classical example of this concept is the Rockefeller Plaza in New York. The plaza is a skating rink in the winter, while it functions as a cafe in the summer.

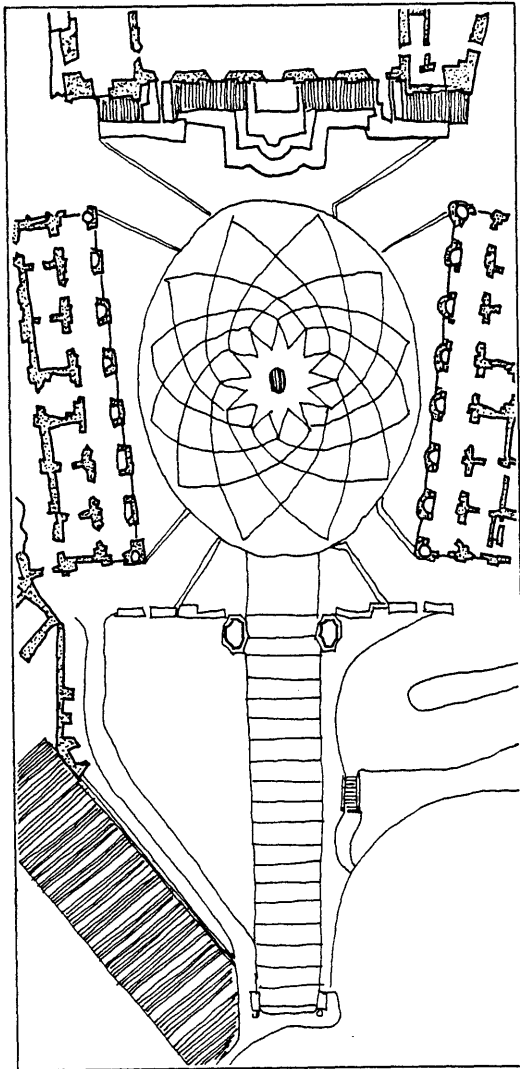
THE UNCERTAIN

As mentioned before, another type of change might or might not happen; its occurrence is of an unpredictable nature. Of this type of change process, man-made intervention is a good example. In the specific case of open public spaces, both the setting (void) and the context (enclosure) are available to this type of transformation. In the case of large open spaces, like parks, the preceding remarks are not applicable because changes in the context would not considerably affect the perception of the space because of the distances between its boundaries. This would not be the case in a plaza or street where the distances usually are shorter and the enclosure is as important as the void in the perception of changing processes in the space.

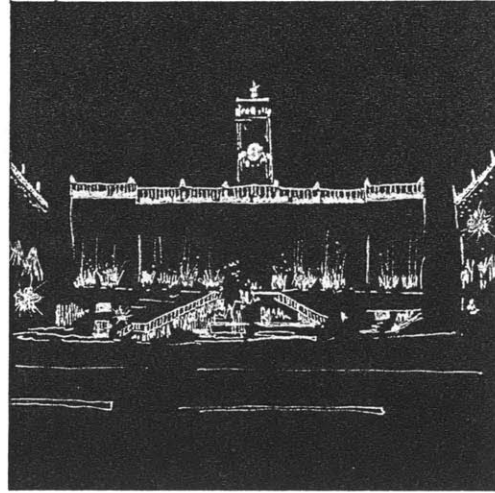
Let us start with the context or enclosure of open public spaces. When designing this kind of space where the context is of primary importance, it might prove useful to analyze how particular settings have been transformed in the past. It would be relevant to find out who has been in control of the process of

transformation and the reactions on city and local levels toward different types of additions and demolitions of buildings or physical components. These facts might give us clues to plan in advance. It would be more appropriate to take an active position in these types of transformations and intervene in the process, rather than a position of reacting toward uncontrolled and unforeseen changes, if our intention is to manage the process.

Depending on the strength and intensity of the concentration of continuity in buildings or physical elements, some contexts will be more resistant to change



The Campidoglio in Rome, plan



The Campidoglio in Rome at night

than others. In the case where it is likely that only imperceptible changes will occur in the context, we might assume that one of the variables that could form part of a changing process is fixed. At this point it is relevant to define the term fixity. Fixity will refer to the high degree of difficulty of altering or changing a context. If the context is fixed it will only serve as a background for the display and enhancement of change.

The Campidoglio, in Rome, is an open public space where the passage of time does not seem to transform or change the buildings that surround the plaza. The space was shaped by regularizing an existing complex of medieval buildings. A line or axis on the Palazzo dei Senatori as an organizing element and a geometric configuration based on a central trapezium characterize the plaza. The space was designed in the sixteenth century and it is predictable by this time that the context — conforming buildings — will only suffer minor changes over time. Except for existing preservation laws, its characteristic timeless fixity might also be attributable to the quality of the design. If the position and height of the lateral buildings of the plaza were modified, a spatial effect, by which the Palazzo dei Senatori at the back is monumentalized, would be lost by reducing the

impression of the depth of the plaza. These buildings are a very carefully designed background.

Against this type of fixed background, the elements in play seem relatively ephemeral. These types of elements would not conform spatially to the setting and are not fixed. Among them are light, sound, or smoke and their capacity to produce change in color, luminosity, and contrast.

Again, the results of the use of ephemeral elements can be both predictable and unpredictable. The difference depends on the forces that could make these types of elements move, be transformed, or change. As mentioned before, one category belongs to the type of process produced by natural forces. This type of process is certain in its occurrence although unpredictable in its timing and final results.

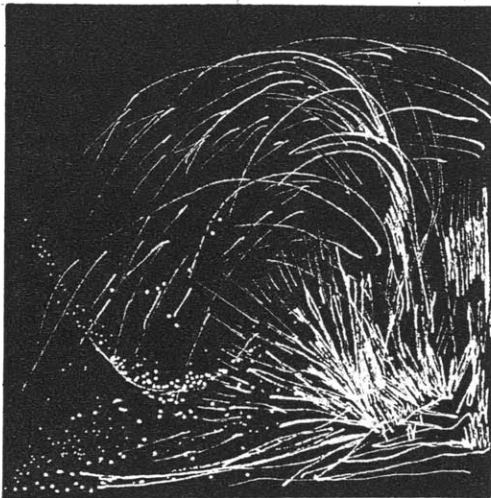
In this section we shall concentrate on changes that, although uncertain in their occurrence because they do not necessarily have to take place, tend to be predictable in their timing and final results. The reason behind this quality is the kind of forces that produce the changing process. The forces are artificial, mechanical, or technical devices. Change in color, light, or contrast could be the result of these kinds of force. The effects can be of high intensity quality. Fireworks displays, utilized for centuries, combine several elements like artificial light and sound to create appealing configurations. Contemporary modalities include the use of laser and light shows.

A park in San Antonio, Texas, is an example of how an artificial light component can be used to enhance the process of transformation between day and night. A series of trees has been lighted to create a magic and contrasting effect.

Another way to differentiate ephemeral changing processes is based on the

way people interact with the process. Humans can take both a static and dynamic position towards them as observers or part of the process. Outdoor festivals or theatrical representations are an example of the latter case.

Every year in Brussels, Belgium, an example of an ephemeral changing process takes place in the Grand Place plaza. The festival is called Dell Ommegang and light, sound, and smoke are combined with human action to produce a special effect for a few days. The festival is held in honor of a past monarch and is grandiose. The public not only participates in the event as observers, but they also dance and improvise, becoming part of a displayed change

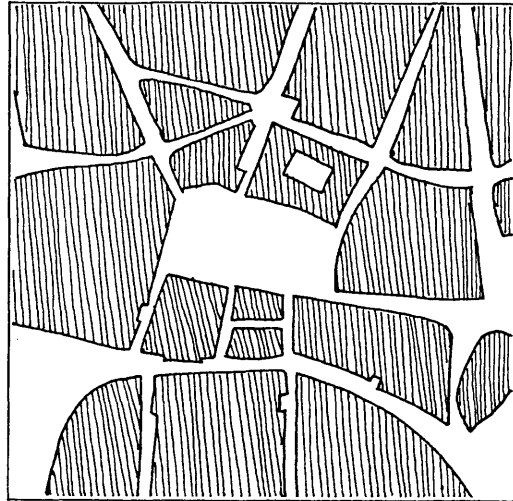


Fireworks display



Lighted park in San Antonio, Texas

Grand Place plaza, Belgium

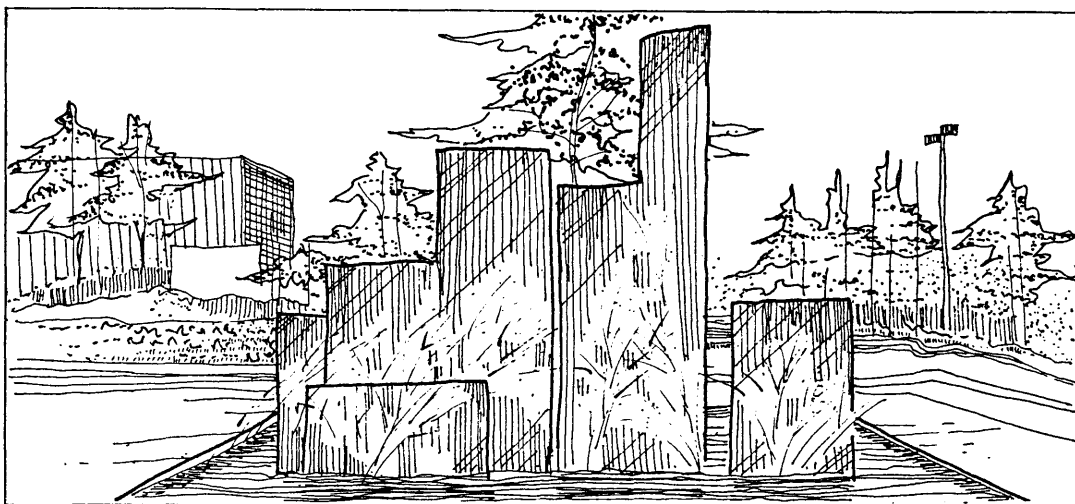


process. Its appeal might be attributable to the fact that people often choose a setting which they can influence over one that is fixed and unalterable.

This type of ephemeral display is one of contrasting elements in fixed contexts. Otherwise this type of background and setting would be rather monotonous and low in stimulation.

Man-made light and sound effects can produce changing effects by themselves. In addition, these elements can also be used to enhance other types of changing processes. An example is the enhancement of running water.

Fountain in Scranton, Pennsylvania, day



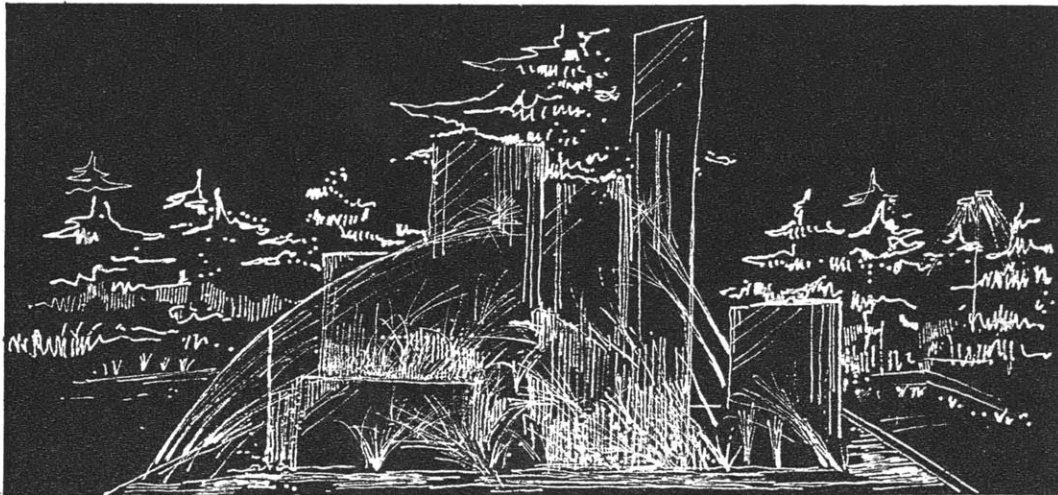
Commonly, in fountain design, artificial light plays an important role in the way the movements of water will be perceived during the night. A fountain in a plaza in Scranton, Pennsylvania, illustrates this effect.

When the context is not a fixed background and major changes and transformations occur at its boundaries, the way of managing changing processes varies. Usually this is the case with contexts that have not been particularly designed and the control over buildings and enclosing physical elements is not centralized in a few hands. An example of this type of phenomenon is streets. The variety of changes that can take place simultaneously or sequentially can be overwhelming. This case is opposite to the previous ones because instead of provoking and enhancing change, the way to shape the future might be to limit and control the changing processes. This concern has been expressed by Tuan:

Place is an organized world of meaning. It is essentially a static concept. If we see the world as a process, constantly changing, we should not be able to develop any sense of place.

On the other hand, a changing background might permit changing solutions

Fountain in Scranton, Pennsylvania, night



that could be rich in form and full of contrast. In this case the enclosure could become more important than the void as a setting for the display of change. This process of change could be characterized by creative demolition or addition of physical elements. This does not mean that changes should be radical, provoking a lapse in the necessary connection to the past. A sense of continuity is always necessary. Lynch is concerned with this issue:

We deal successfully with change only where we can simultaneously preserve some partial continuity, whether of people, things, or places.

Man-made changing environments have the potential to become completely detached from previous associated meanings. As Lynch points out, there is a need for "new stimuli," but also for "familiar reassurances."

If the focus of control of these types of background could be established, the relevant issue would be what to change and what to preserve. In most cases there could be a middle-ground between a continuous process of change and a complete lack of it. It is more important to know not only what to preserve but when and how a preservation process should occur.

As this investigation proceeds to a design phase, other types of changes will probably be discovered within the broad categories already explained.

TIME AND CHANGE

As Don Fabun states, when speaking about change, two different orders can be established. One order is based on the forces that displace elements in time and space as we experience them: natural and human forces. These processes of transformation can be measured in terms of quantity. On the other hand, changing processes can also be measured in terms of quality. The inclusion of the time factor adds the quality dimension to the analysis of change, thus establishing a second order.

The sections on the different types of change and their implications have thus far made no explicit references to time, which is, however, implied everywhere in the idea of change. From now on, time will be a point of reference when explaining changing processes.

Urban design based on change and time as guiding principles must take careful account not only of the kind of different possible future related changing process but also when they are likely to happen, and at what rate and pace. This

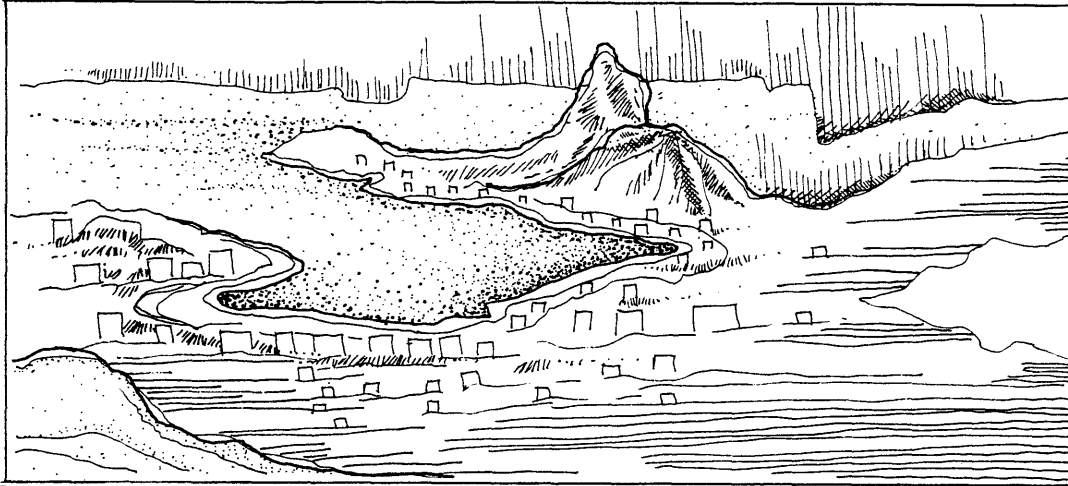
task is of particular importance if we consider that differentiation and levels of attraction between urban spaces might be based on the timing of events of public significance rather than just on spatial configurations.

For each of the different processes of change mentioned before, an appropriate pace and level or rate should be envisioned or set. Moreover, it is important to not only select or imagine rate and pace but also the temporal spacing of them.

When thinking about rate and pace of change, it is important to clarify that change is necessarily relative. Processes of change are also uneven. If all processes occurred at the same speed, or even if they accelerated in unison, it would be impossible to observe change. When the rate of change increases at an accelerating speed, in other words when its pace increases, without any corresponding reaction in the pace and rate at which further responses can be made, change will overwhelm us.

What is an appropriate pace for a change process is an important question to answer. A correlation between the extension of opportunity time limits within change could occur and the pace of this process might exist. Rate of change refers to the percentage of the environment that is changing; pace of change refers to the time period over which the changes take place. In short time lapses, fast-paced changes are tolerable and sometimes desirable. The opposite occurs when the limits expand; fast-paced changes will increasingly become intolerable. Fast-paced transformations which continue over a long period of time can make people so ignorant about the past that they would not see anything unusual about the present, making changing processes less perceptible.

Another factor is that each space in a city has a different pace and rate of change -- for example, the difference between the pace of transformation in a



Rio de Janeiro

business district, as opposed to a historically preserved area. The pace of change in our case study, a public open space, will depend on the use activities that are demanded, among other considerations.

But rate and pace of change are not the only important concerns in the relationship between change and time. Changing processes should also be time spaced. This implies the use and selection of time spacing techniques. When and for how long a process should take place should also be programmed.

The preselection of time limits is an example of these techniques. Time limits could be defined as two temporal spatiotemporal boundaries within which a changing process would take place. The carnival in Rio de Janeiro illustrates the concept of time limits. This incredible process and display of change occurs every year within three days in February. The carnival transformation processes range from the decoration of streets and use of elaborate costumes to grandiose parades and musical festivals. The carnival always starts three days before Holy Wednesday. The entire process of preparation, action, and clean-up involves several days.

The task of spacing changes involves more than the selection of time limits.

Other tools are also available for spatiotemporal urban design, among them the use of markers. Markers are key events in key times. Sometimes they will set down or inform about an oncoming future change process. They might also characterize or symbolize the process itself. Markers can also indicate the importance of an occasion as well as the level at which people should interact in space and time. In the formation of an audience that could be attentive to change–event processes, the use of markers can be timely. An example of a marker is the ignition of the flame at the beginning of the Olympic games. This tradition followed over the years is a symbol of an on–going future changing process that takes place every four years. Markers could also be used as instant "urban narcotics," a term used by Tay Kheng Soon in his writings, against the routine or boredom of a city or an open public space. Even more, markers usually are surprise elements; some occur when we least expect them.

The order in which changes will best precede or follow each other is another concern. Order of precedence implies the use of sequences or patterns. It is very difficult to think of a place experience as an isolated point in time and space rather than as an element linked to a flow of change events that have some structure and shape.

Our evaluation of a setting is often influenced by how we got there and what our preceding experience was. Sequences or patterns could naturally conduct us from one change station to the other. It is probable that a setting that provides sequences of change experiences that build on one another is more likely to produce high quality spatiotemporal experiences than one that promotes conflicting patterns and sequences. The components of a sequence will be referred to as phases. Phases indicate position in time as well as in space.

There might be a metaphorical way to associate a sequence of changing

processes with sequences that form parts of drama or musical compositions. The task of enhancing, displaying, and managing a process of change is also an art. Following this line of argument, it could be useful to look for inspiration on other types of artistic techniques that have proved to be generally effective in producing certain consistent responses. For example, a changing process could also have a climax. This approach will be further explored in the case study.

A periodical recurrence of a complete sequence could become a cycle, which usually is a long-term change process. Examples of cycles are the one produced by nature. Man-made cycles also exist and can be designed. Cycles, because of their recurrence and repetitive nature, could become the key tools to create the character of persistence and stability that places must have in order to possess a sense of place. This does not mean that urban spaces should be static and unchangeable; rather, it means that change should not always be in progress. A harmonious solution should be found.

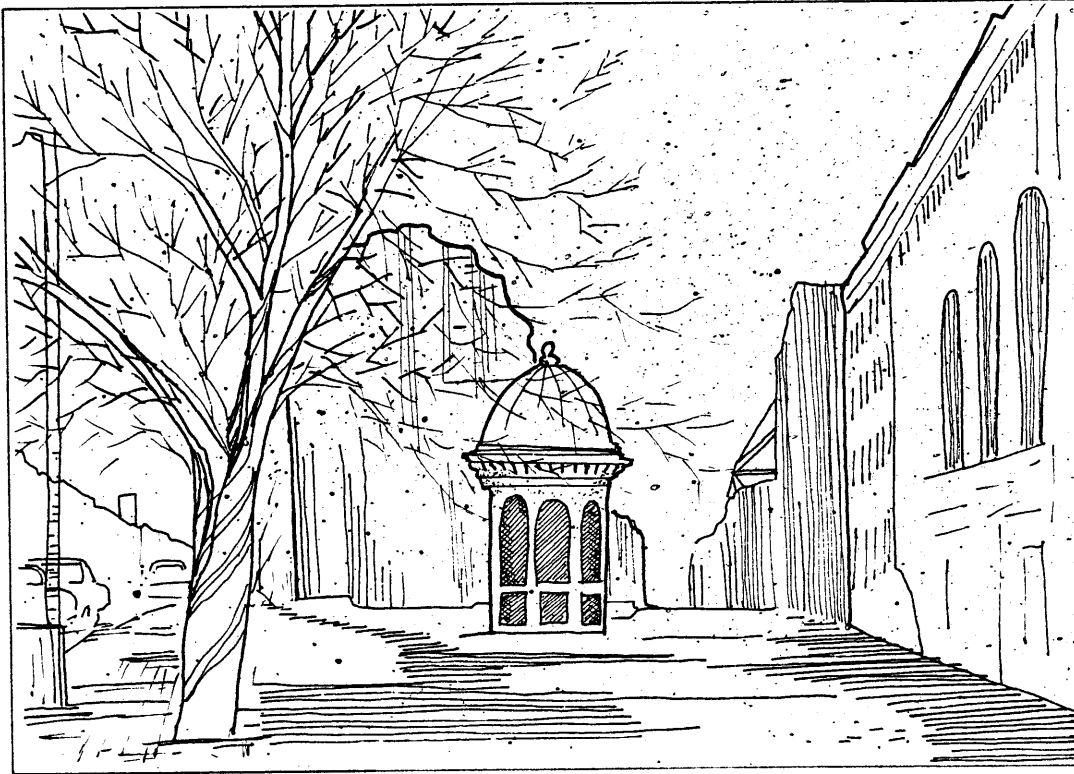
A timetable with reference to pace, change, and time spacing will be envisioned as part of the spatiotemporal design of the case study, an open public space in the context of a rapid changing environment, like Boston.

2. CASE STUDY:

BOSTON CENTER FOR THE ARTS

Successful outdoor public spaces possess a spatiotemporal image. This image is the result of both tangible and intangible elements. The image is a product of the relations between functions, activities, and physical components. But these elements should be viewed as transient. Their characteristics as well as their relationships are constantly evolving and changing over time. Because of this fact the concepts of change and time should be considered in the analysis and design of a public space.

The importance and applicability of time and change as guiding principles for the conception of a public space and the creation of a spatiotemporal image will be illustrated in a case study. The emphasis will be in the process and not in the results. A square in Boston will be the setting for testing a program based on the concepts of time and change. In addition, the consequences of guiding a design, where different processes of change will be introduced as aims, will be explored.



Montgomery Square in the winter

Most of Boston's squares and plazas have little recorded history. Traditionally they have appeared with no use assigned to them, as merely open spaces subject to misuse and neglect. This is the case of the study area. This underutilization of public plazas or squares is in a way attributable to the lack of planning in relation to what activities, uses, or transformations could attract people to the space.

Traditionally, U.S. nationals have never used or enjoyed plazas as other cultures do. Jere Stuart French explains what might be the reason behind this behavior:

In America, a frontier society, fearful of intruders, rigorously protective of private property and independent choice, can not easily adapt to an open, give and take urban structure, more common to Europe and the Middle East.

In consequence, borrowing intentions from other cultures, where concepts of personal space as well as climatic factors differ greatly, become problematic. Concepts of physical configuration and use should be first grounded in cultural behaviors and then applied in the particular context of the public space.

An underlying hypothesis in this investigation is that the introduction of a time program in the redesign of these spaces will improve the present condition of existing public spaces, like the ones in Boston.

On the other hand, some of Boston's public spaces play an important role in the structure and associated meanings of the city. One of the reasons behind this situation is that they are places to gather, where people meet one another in moments of leisure for enjoyment. Paul Zucker discusses this crucial purpose of a square or plaza:

They create a gathering place for the people, humanizing them by mutual contact, providing them with a shelter against the haphazard traffic and freeing them from the tension of rushing through the web streets.

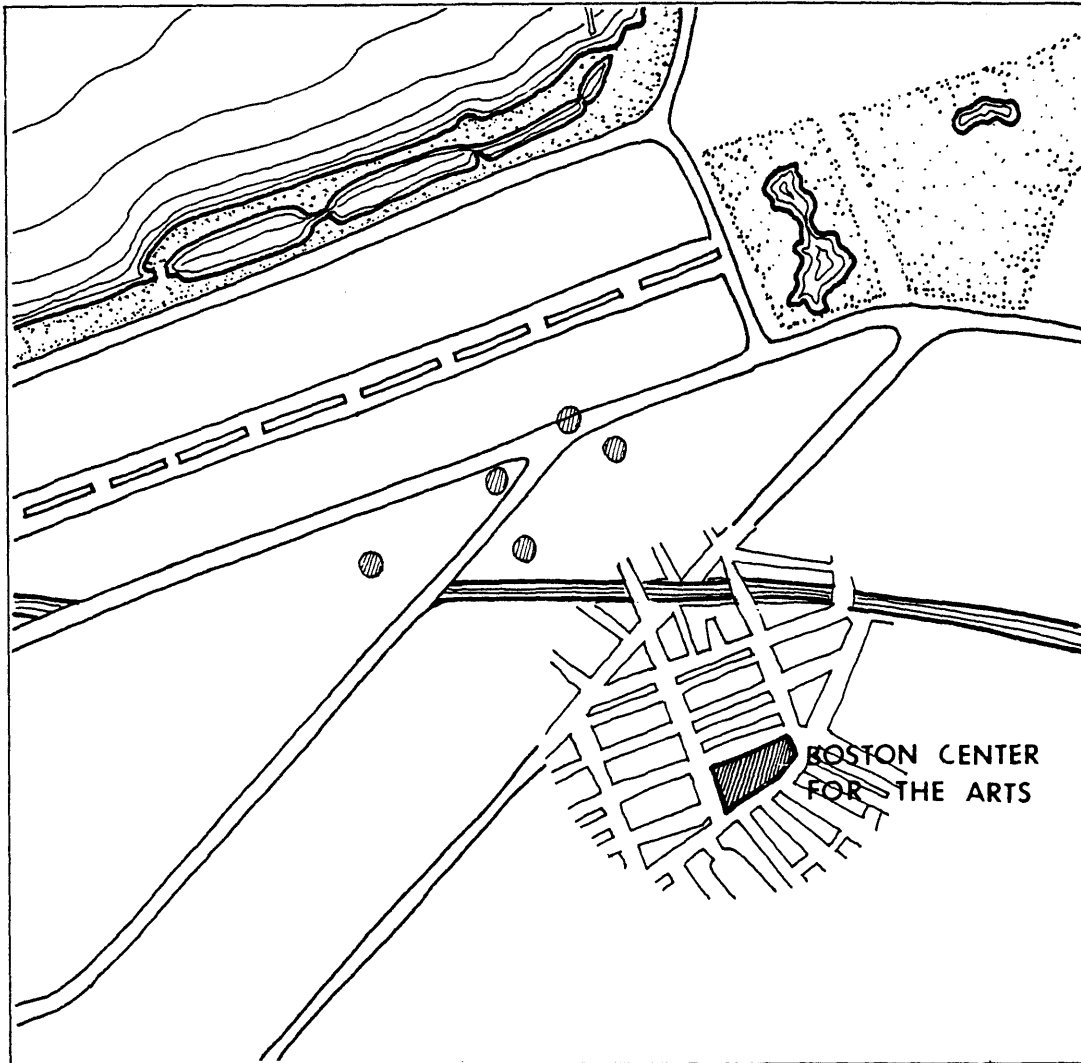
Among other types of public spaces, a square was chosen to illustrate the present investigation because of its important purposes in a city, such as the one mentioned before, and its multi-functional nature. A square should fulfill a wide variety of needs for the city and its people. It is a space for a multi-faceted client; therefore, there is also a great lack of any sense of control of its use.

Furthermore, as part of the living organism of the city with its changing conditions, a square is never completed. The elements of a square are subjected to the flux of time. Some may vanish, be destroyed or razed; others may be replaced, and new ones added. In a few words, a square is a potentially excellent example to illustrate how an intellectual framework based on the concepts of time and change can be applied.

THE PAST

We shall start by analyzing and describing the past of the square. This section will not remain a mere historical discussion; rather, it will stimulate some thoughts for the urban redesign of the space. Past change processes that took place in the site will be studied. The intention will be to answer the following questions: At what rate and pace have change-related processes occurred? Which constancies have persisted over time? What are the consequences of the different change processes at both city and local levels? The analysis will be done in terms of physical transformations, changes in use and related activities, and past associated meanings and symbolisms to the plaza.

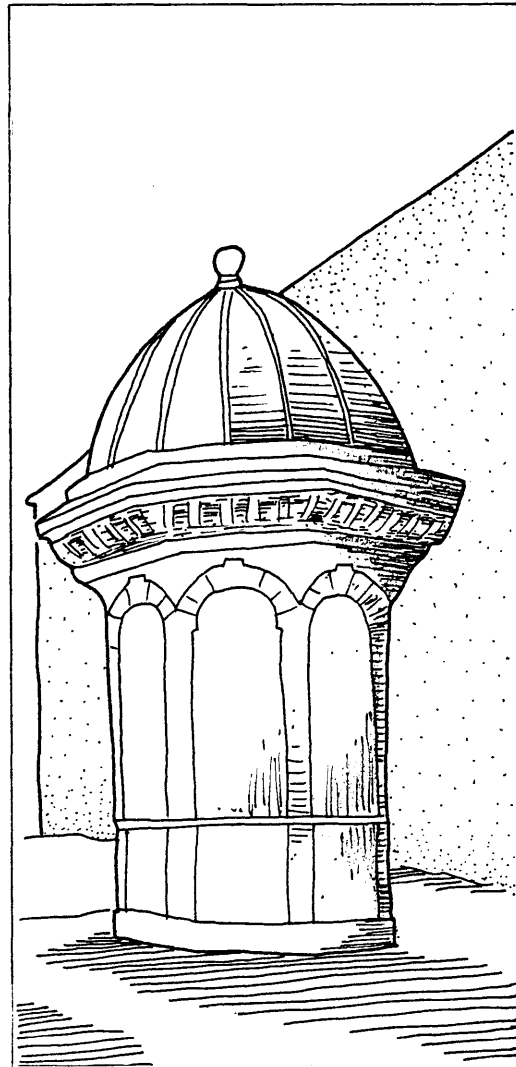
Guided by the idea that all the components and functions of a plaza do not carry the same weight in the development of a spatio-temporal image, a search for a change process "theme" based on past events or transformations will be pursued. Finding a theme for the plaza by uncovering the past history and current local direction will help in the decision-making of which change processes to enhance and which ones to manipulate or reshape.



Location of the Case Study: Boston's South End

The square is in front of the Boston Center for the Arts. It is triangular in shape, formed by the intersection of the Back Bay grid and Tremont Street. The space is bounded by Tremont Street, Clarendon Street, and the complex of interconnected buildings that comprises the center. The plaza was formed when Montgomery Street was bricked over in the early 1970's. The previous existing triangular traffic island was known as Montgomery Square. Its trace is still visible in the fenced-in planted area toward the outside corner of the site. Few

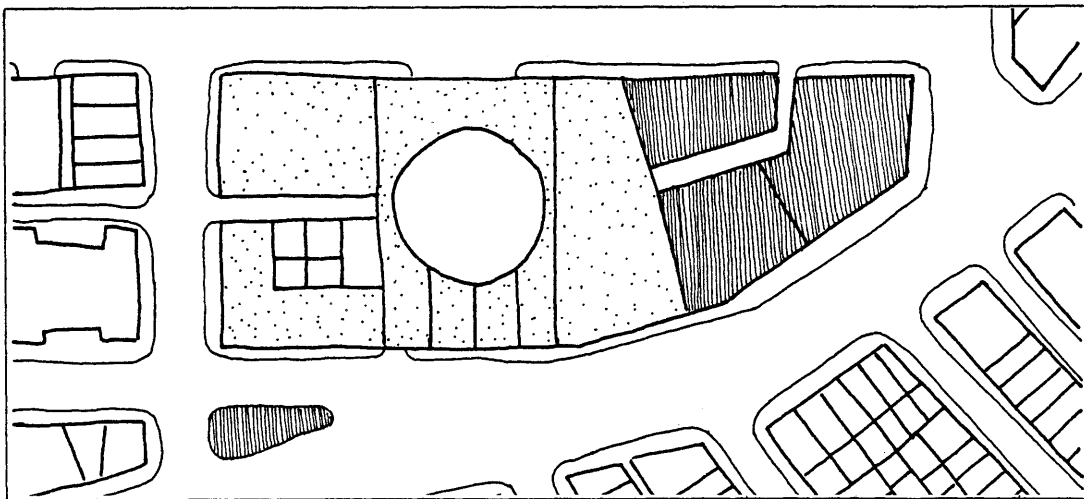
It is recorded that the square was created for a purely ornamental and social amenity, and perhaps to improve the view of the buildings that presently accommodate the arts center and to make room for a theatrical kiosk salvaged from an orphanage in Roxbury, Boston, that was demolished. Until recently the kiosk was used as a ticket-selling stand. Presently the kiosk does not have any functional purpose. But it is highly visible and characterizes the plaza because it is a distinctive element deployed in the space. Even more, the kiosk has the potential to become a symbol for the plaza.



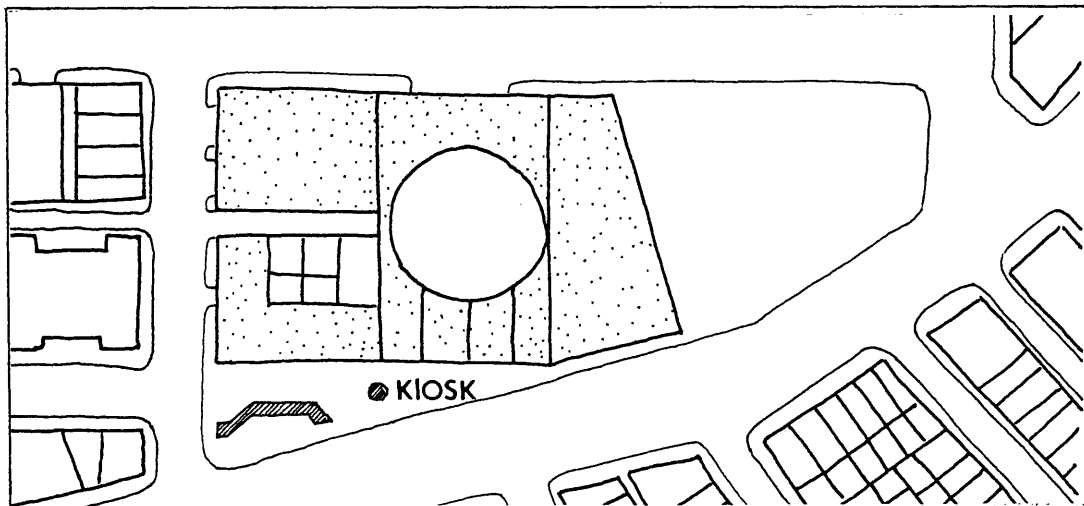
Kiosk

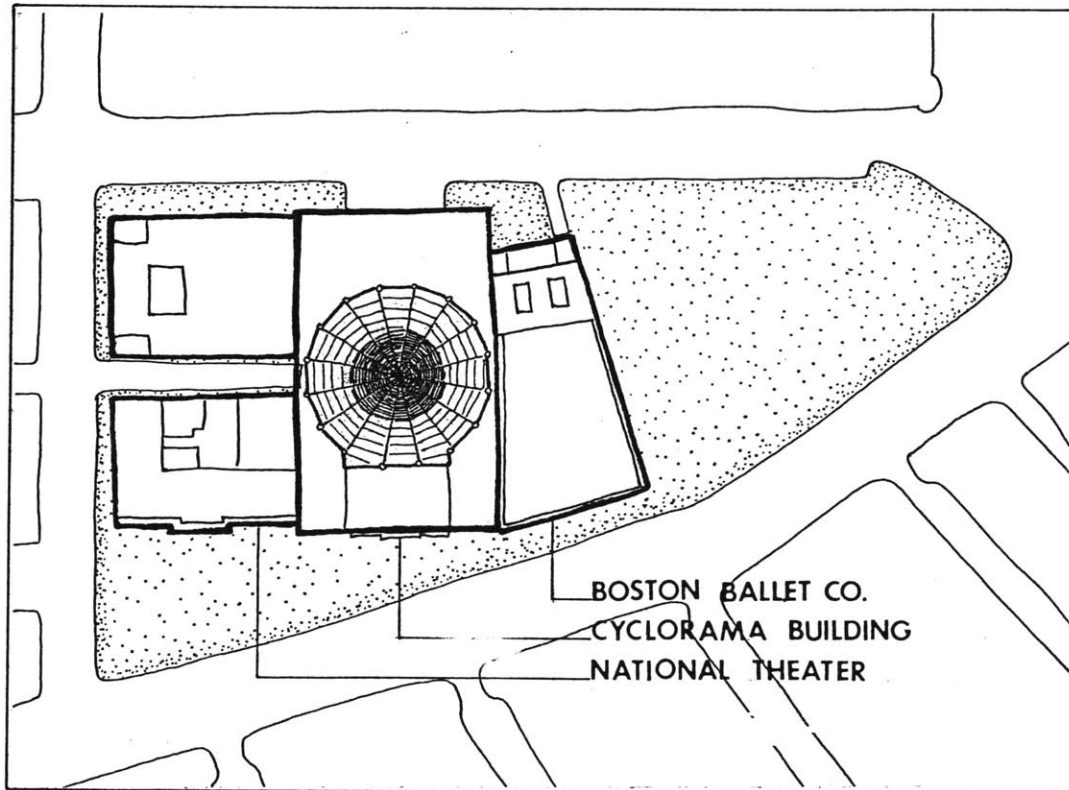
Since 1971 the square or setting has not suffered any major physical transformation. A lack of activities and uses characterizes this square. The square has not been fully used since its conception. During the Bicentennial celebration, the square became a place to rest, grab a snack or directions at the Boston 200 Visitor Information Center that operated there. The fact that this activity process was planned and related to a special event might be a clue for the design of future change process scenarios for the square.

Site in 1913



Site in 1971





Existing group of buildings on the site

The square is a dominated and hierarchical outdoor space. It is distinguished by a group of buildings towards which the open space is directed and to which all other surrounding structures are in many ways related. The perspective of the surrounding buildings and the suction of the dominant structure, the arts center, create the spatial tension of the Site. This tension compels the spectator to move toward and to look at the focal group of buildings. This characteristic of the space makes the analysis of the past of the buildings or background as fundamental as the one of the Site itself.

Before 1971, when the Boston Center for the Arts was initiated, the whole site was occupied by several distinct buildings: the Boston Flower Exchange Company, the National Theater, the St. Cloud Apartment House, and a four-story Victorian town house. Not all of them faced the actual plaza.

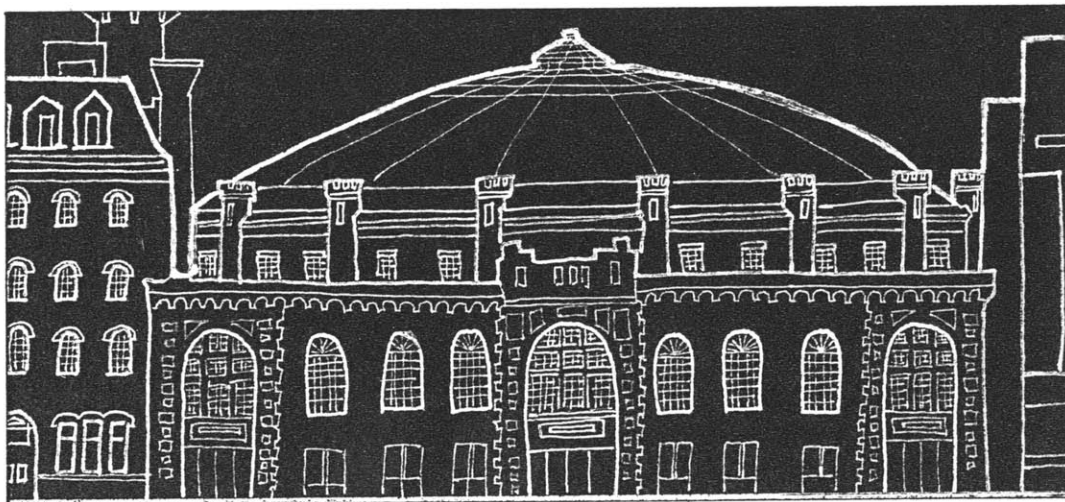
The Boston Center for the Arts was originally created to provide inexpensive space for many of Boston's artists and art groups without an appropriate home.

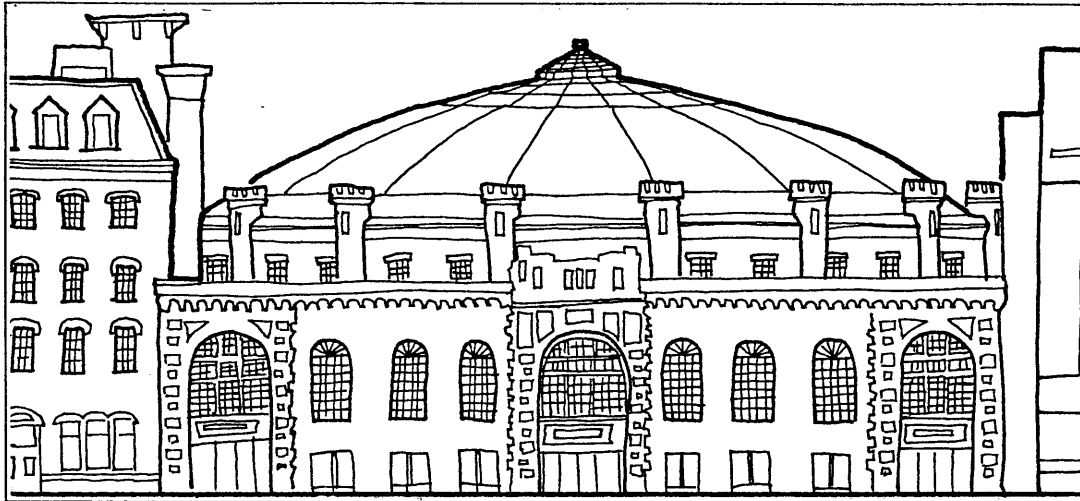
A quote from the initiators of the center highlights this intention:

We sincerely believe that the cultural life of the city will stagnate if it relies solely on its established institutions. Young experimental artists are essential to the vitality and future growth of this community's cultural activity.

The center was designed to help young and struggling groups establish their reputation. It was intended to increase the visibility of its constituent groups and therefore broaden their financial support. The intentions could inspire a theme for the plaza where processes of change could help make the city and the neighborhood aware of the work of the artists that reside in the center. The center is supported by the city of Boston and private foundation grants. In 1986 the complex held the Boston Philharmonic, the Associated Artists Opera Company, the Boston Ballet Company and School, the Community Music Center, the Theater Company of Boston, and other performing arts groups and studios.

The Cyclorama Building, night



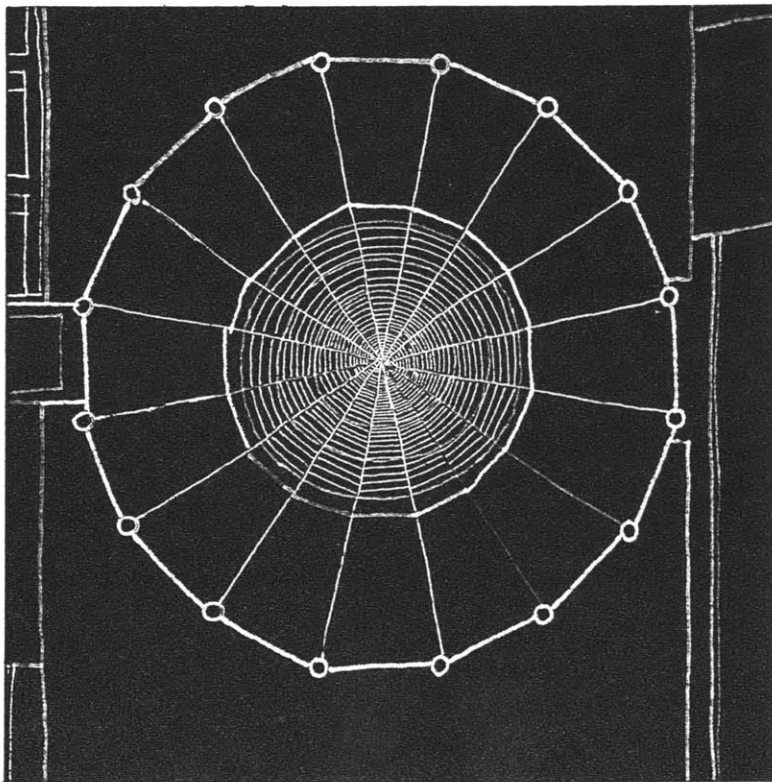


The Cyclorama Building, day

The main building in the complex, that previously accommodated the Boston Flower Exchange, is the Cyclorama building which contains one of the largest glass domes in the continent. The dome is suspended above a grandiose rotunda and is a distinctive feature of the site from a distance. Consequently, the Cyclorama is the most impressive structure in the complex. It was designed in 1884 by Cummings and Sears to hold a gigantic circular painting of the Battle of Gettysburg. After the painting was removed to another place in 1892, the building was used for revivalist meetings and sporting events. John L. Sullivan, one of the South End's favorite sons, fought there. In 1923, it was renovated into the Boston Flower Exchange, accommodating it until 1968 when the BRA relocated this activity to the South Bay area. In a map of 1917, the Cyclorama building is labeled as the New Tremont Garage. It is evident that the building has suffered several transformations of uses and related activities in the last century. But most of its physical features have persisted over time. This might be attributable to the size and morphology of the space. The building bulk is a fixed element over time.

On the other hand, the present facade is a twentieth century alteration with no indication of the domed space within. In addition, because of the height of the facade, the exterior turrets surrounding the dome are not fully perceived from the plaza. Another planned alteration of the facade is mentioned in the records: the mounting of a glass marquee, from an old Jordan Marsh building, at the entrance of the building. This alternation never took place. The facade is presently preserved and has acquired the fixity of the interior space.

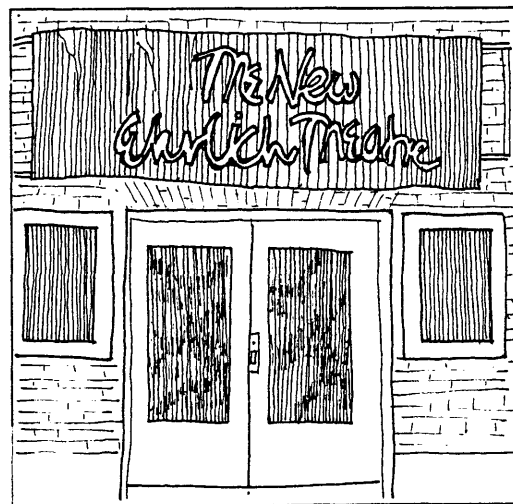
The domed space in the Cyclorama building is now used for exhibits, performances, spectacles, and as a flea market. This variety of large-scale events ranges from antique shows to benefit balls to professional squash matches. The rest of the building holds the central offices of the Boston Center for the Arts and the BCA art gallery.



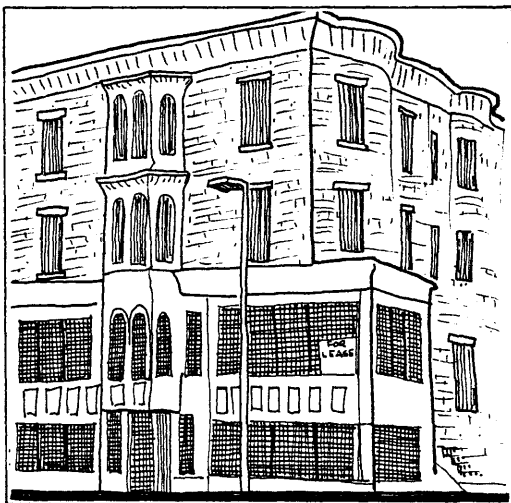
The Cyclorama's dome

The second historically important building that faces the plaza is the National Theater. It was built in 1911 and it functioned as the largest Vaudeville house in New England for several decades. Famous entertainers and singers performed there. Among them Gene Autry and Mae West. Afterwards it was used exclusively for film. The theater, however, remains boarded up twenty years after the establishment of the center. Plans to renovate the structure into a 3,000 seat theater for music and stage productions, and to construct an adjacent parking garage for patrons of the center's activities, are moving forward but they are still tentative.

If facing north, the National Theater stands to the right of the Cyclorama building, and to the left stands one of Boston's first apartment buildings. After being vacant for many years, it now houses the Boston Ballet and its school, the community music center, a children's art center, and four theater groups. The New Ehrlich Theater, one of the most active small theaters in Boston, is also located in this building. The Boston Ballet Company is planning a substantial renovation of their space. This renovation would add new dance rehearsal and performance space for groups other than the Ballet.



Entrance to the New Ehrlich Theater



Building transformations on Tremont St.

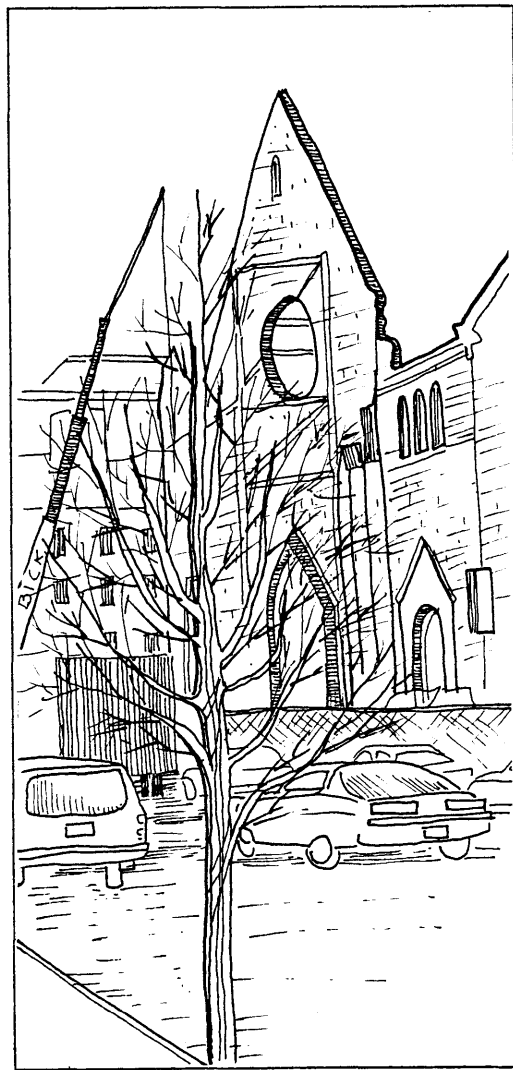
The last existing building on the site, but not facing the Montgomery Square, is a four-story Victorian house that stands all by itself in a small parking lot adjacent to the theater.

After discussing the transformations that both setting (square) and background (buildings) have suffered over time, it is also important to explain what is happening in the surrounding context. Although the square is a particular kind of territory, its characteristic features are also due to its relational interdependence with neighboring streets, avenues, and other squares.

In recent years, the square environs have changed drastically. New restaurants and stores are moving into once vacant storefronts along Tremont Street. Some provide services to the neighborhood residents; others, particularly a series of restaurants overlooking the site, have created a destination for visitors from other areas of the city. Two rehabilitation projects fronting the site have a particularly strong impact: the Saint Cloud, a former residential hotel, and Clarendon Court, originally a church. These are two large formerly abandoned buildings now reused for commercial and housing development. The hotel project is completed, but construction on the church project has just

started. Because the site is at the center of a growing activity center, the potential for increased use of Montgomery Square is significant.

have taken place since the construction of the first buildings, and then since the creation of the square. In the past, most of the changes that took place were related to uses and activities inside the buildings, since the square did not exist as such until 1971. Since that date less changes have occurred in use or function and more in the physical configuration of the setting and background, and especially in their immediate context. These physical or secular changes seem



Clarendon Court construction work

to continue at a high pace and rate in both levels. Plans exist for even more future changes. The space has always been a rapidly changing environment and thus appropriate as a case study in this investigation.

The physical constancies that have persisted over time are mainly the building bulks and most of the facades in the background (arts center), and to a lesser extent in the neighboring context (South End). As time has passed, the buildings that comprise the center have become more fixed. Presently they are protected by preservation laws and thus are unalterable. But the buildings in the neighboring areas continue to experience interior and exterior alterations. They are not fixed in time and might affect dramatically the perception and function of the space.

The buildings and their related activities have always been associated with spectacles, music, art, and exhibitions. This was less so before the Boston Center for the Arts was created. Over several decades, some of the buildings facing the square accommodated different types of uses, two of the three buildings that face the square were conceived for an art-related purpose. An artistic-display change theme emerges as a possible path to follow from this constancy of use.

A constancy in the setting or square itself is the lack of activities that take place in the space. It is mainly an access pathway to enter the buildings. Its size and location could allow for a considerable range of activities. The introduction of a theme for enhancing and reshaping future processes of change could transform the desolation that is now perceived in the square.

Few records exist on how all the different past secular change processes were perceived at the city and local levels. None exist on the impact of cyclical changes. The transformation of the buildings and the square into the Boston Center for the Arts was opposed by the South End community and other city



Tremont Street, vehicular traffic

groups. Their arguments were based on the fact that most cultural centers that have been built in the United States have not stimulated the kind of artistic growth that was expected from them. Also, the community thought that to spread "culture" around the city was a far more effective method for stimulating interest in the arts than to isolate them in a single location as the center. Nevertheless, the center was built and the square created. Although the center has the potential to become a more active and attractive nucleus of amenities in the city, the original concerns of the community groups have proved to be partially accurate. The National Theater is closed and the square is deserted during most times of the year.

In the next section the present conditions of the space will be analyzed in terms of a time-program based on concepts of change and time. Then a new future image for the space will be proposed guided by these concepts.

THE PRESENT: A TIME-CHAGE SITE ANALYSIS

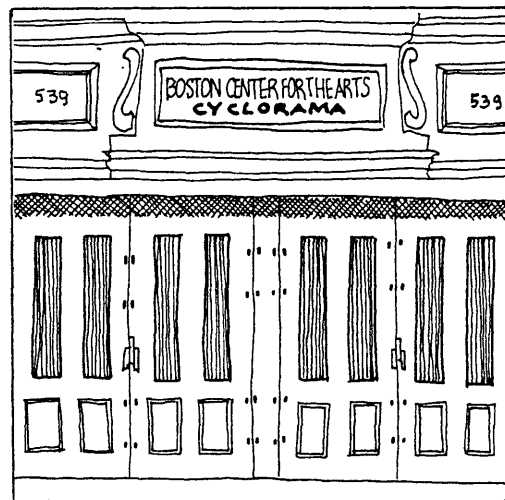
The past of a place can guide an urban design based on the concepts of time and change. A theme of constancies unveiled from the past could provide a sense of continuity to future processes of transformation on a site. But it is not only important to learn from the past, we should also understand the present.

In order to be able to move to a design phase based on the guiding principles explored in this investigation, three different tasks based on the present conditions of the site should be completed.

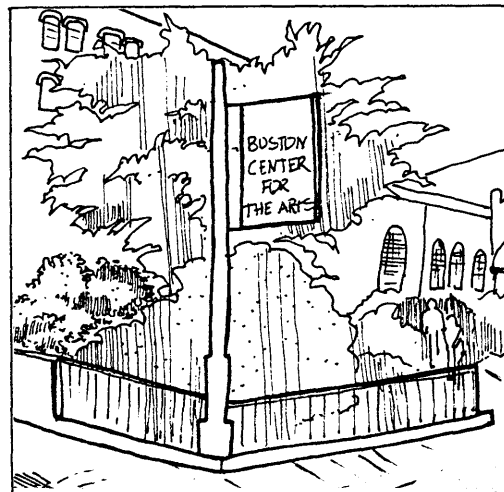
First, the context of the study area will be studied in terms of existing conditions that will affect how the arrangement of selected time–change parameters will be perceived and observed, thus providing information about the impact of future site processes of transformation on local and city levels. This task will be related to the physical conditions that surround the site. On the other hand, the second task will be related more with the site itself. The site will be described and analyzed in terms of time–change components that have been previously identified. These physical components correspond to both cyclical

and secular change processes. The cyclical change components will be: natural light; water, rain, and snow; landscape and materials; wind and atmospheric changes. The secular components will be: artificial light and information—display devices; non—spatial, ephemeral, and special effects; and spatial fixed demolitions and additions. It is intended that the arrangement and transformation of these physical components will provide a framework of stimulation and sources of information which will induce users of the place to feel involved with it. Users will become actors and observers of subsequently planned and managed processes

Entrance to the Cyclorama building



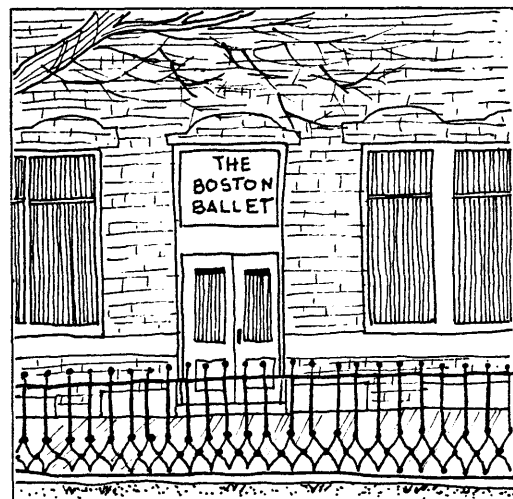
Boston Center for the Arts sign



of transformation that will probably take place in this portion of Boston's South End.

The analysis of the present should be part of the design process because it will provide general facts and information about the existing constraints and potentials of the site. By analyzing and describing the particularities of the area, the design experiment will acquire a sense of reality based on an existing set of conditions.

Finally the third task involves the selection of a set of time-change performance criteria or design goals that the designer will aim for and the proposal should ideally fulfill. This set of criteria could be used to test the validity of the use of time and change as guiding principles in the design process of an urban project. The selection of the criteria will be based on the guiding principles that are being tested in this investigation. The proposal differs in this way from those more commonly used for urban design.



The Boston Ballet's entrance

CHANGING ENVIRONMENT

PROCESSES OF CHANGE

CYCLICAL CHANGES

Certain in their occurrence

-- Continuous patterns
of change

Produced by natural forces

Less predictable in their
timing and in the degree
of control in the results

Non-spatial/Ephemeral

Man as an observer

Conveyance of a sense of
continuity and reality

SECULAR CHANGES

Uncertain in their occurrence

-- Discontinuous patterns
of change

Produced by man

More predictable in their
timing and high degree
of control in the results

Spatial/Fixed

Man as an actor

Conveyance of a sense of
fantasy

LIFE SCENARIO

ALL-YEAR AROUND SCENARIO

WINTER SCENARIO

Winter-Day-Scene

Winter-Night-Scene

Special Event-
Winter-Night-Scene

Special Event-
Winter-Day-Scene

Transitional
Fall-Winter Scene

Transitional
Winter-Spring Scene

SUMMER SCENARIO

Summer-Day-Scene

Summer-Night-Scene

Special Event-
Summer Night-Scene

Special Event-
Summer Day Scene

Transitional
Spring-Summer Scene

Transitional
Summer-Fall Scene

SCENARIOS

SUMMER --
WINTER DAY SCENE

SUMMER --
WINTER NIGHT SCENE

Sun, Moon, and Artificial
Lights Component

Water, Snow, Rain Component

Landscape --
Material Component

Wind-Atmospheric
Component

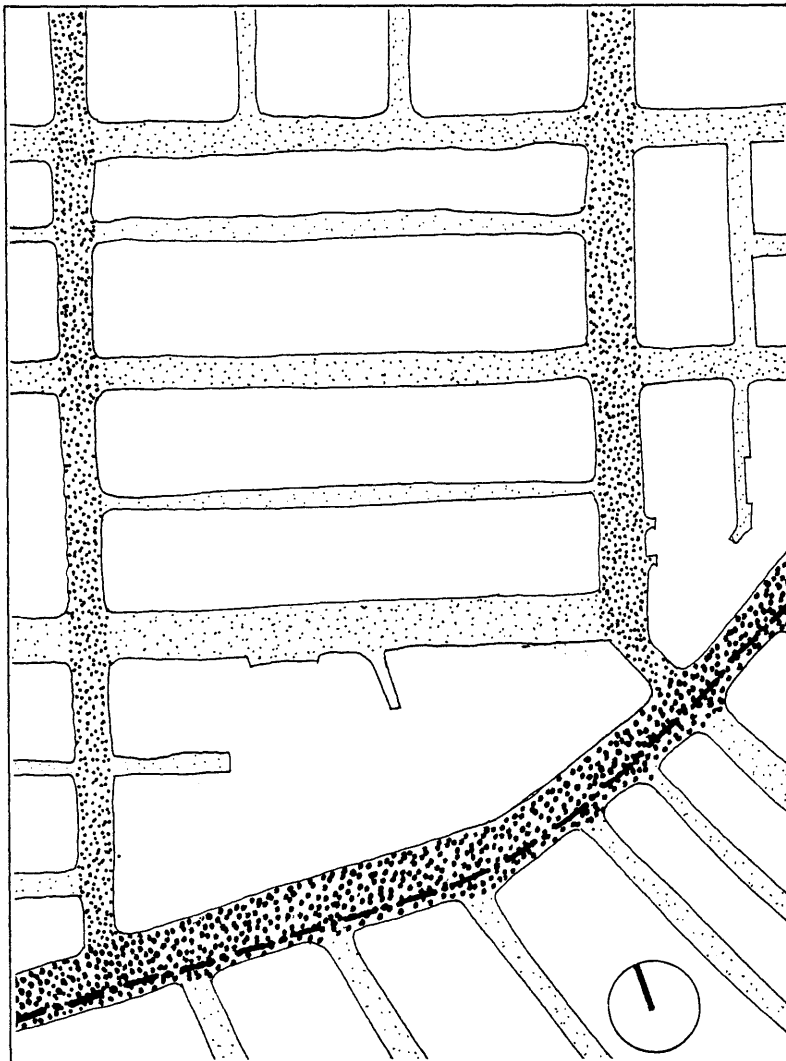
Information,
Display Component

Non-Spatial, Ephemeral
Special Effects Component

Spatial, Fixed Demolitions,
and Additions Component

A series of contextual characteristics of the block will affect the way in which future processes of transformation will be perceived or appreciated. In order to understand these conditions, the context of the site has been evaluated in terms of the existing hierarchy of streets, view corridors and fields, levels of fixity and transformations, and a variety of activities and physical elements.

The study block is bordered to the south by Tremont Street, the busiest street in the immediate neighborhood. To the east and the west two important but less utilized streets run perpendicular to the site. Finally to the north,

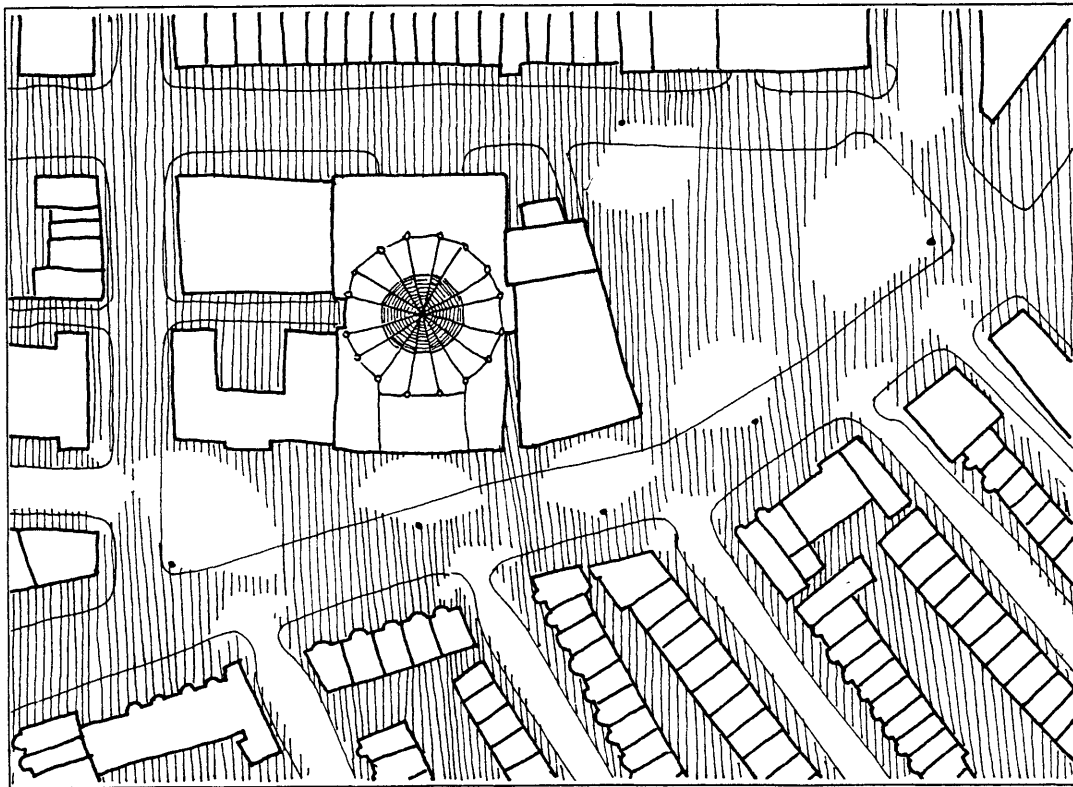


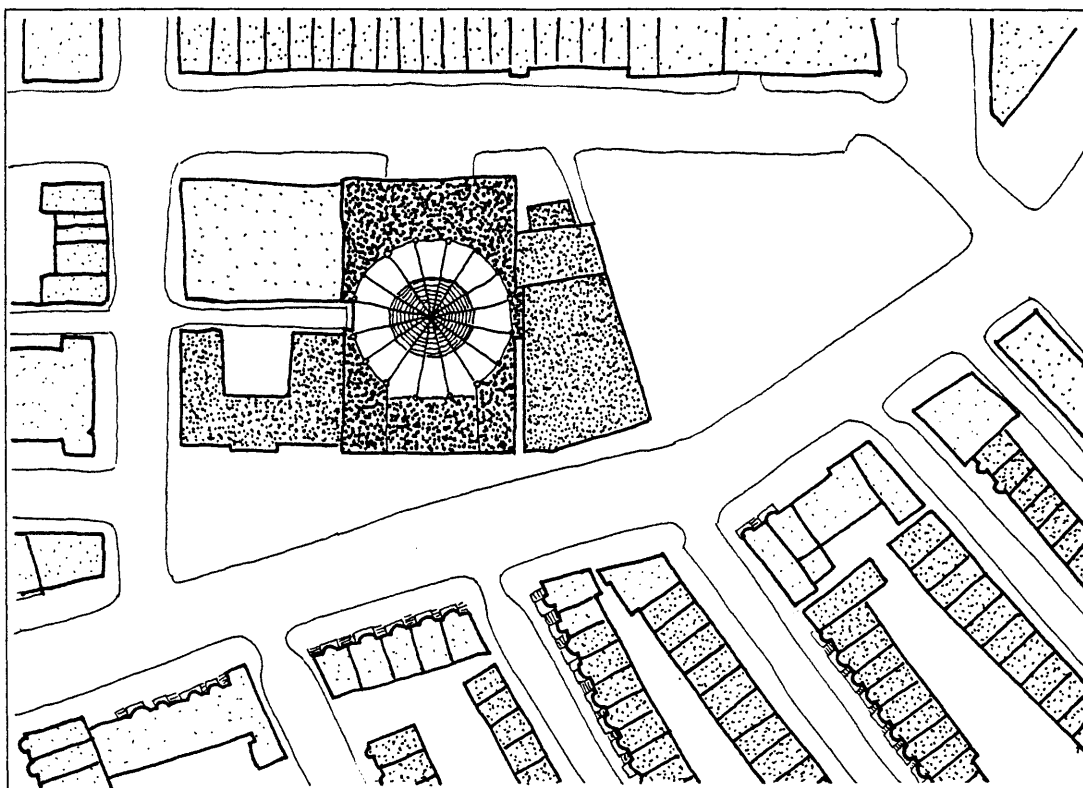
Street hierarchy

a less frequented avenue borders the site. In the design proposal it will be relevant to address the fact that the directionality, layout, and intensity of use of the streets might dictate the location and axial relation of time-change components or systems of the block. If the street system matches the location of time-change features, the effectiveness of the proposed arrangements in terms of how frequently they will be perceived will increase.

Another factor that could affect the physical location of these components is the existing view corridors and fields that are directly related to the layout and configurations of the streets and of the block itself. Views can be differentiated in terms of how people will be moving through the (surrounding) environment. An information and stimulation system for people on foot should be designed to sustain both a casual glimpse and a prolonged visual involvement. People in cars

Main vistas and view corridors





Levels of fixity on the site

will have different needs: the visual impact should be strong so that these processes can be recalled. Tremont Street is an important view field for people traveling on foot as well as those who are in cars. This quality is less true for all the other adjacent streets. A series of radiating streets to the south ends of the block. These streets are potential view corridors and locational guides for the display of processes of change.

The context of the site is being transformed dramatically at various levels in terms of land use and built form. The level of fixity on the site and in the surroundings varies. The high level of fixity of the existing historical building on the block might indicate that it would be more appropriate to utilize their facades as backgrounds for the display of time-change components, rather than trying to transform them physically by adding or demolishing built elements. The level of

fixity of the open space is radically less strong. New construction could easily occur in its realm. One reason for this condition of fixity weakness is the fact that the open spaces on the block have not been properly designed and are undefined in terms of purpose and physical form.

After studying the context, the specific area for the design experiment will be evaluated in terms of the time-change parameters that have been addressed in previous chapters. First the inevitable type and then the probabilistic type of change-time components will be explored by confronting them with the present conditions of the site.

The enhancement of inevitable seasonal and other cyclical changes can contribute to the expression of a place. One of these components is natural--light. The selected study area is laid out in such a way that natural light can be used to its best advantage. Sun comes into much of the space because the block is oriented towards the south.

The block's southern exposure is a condition that could also be enhanced and used as a generator of warmth in the winter. The present configuration of existing open spaces does not address the privileged orientation of both open and built space.

Natural light could be used as a component that will be transformed by itself; but it also has the potential to be used as an environmental moderating element that could permit the creation of comfortable environments where other types of change-time processes could be perceived and enjoyed.

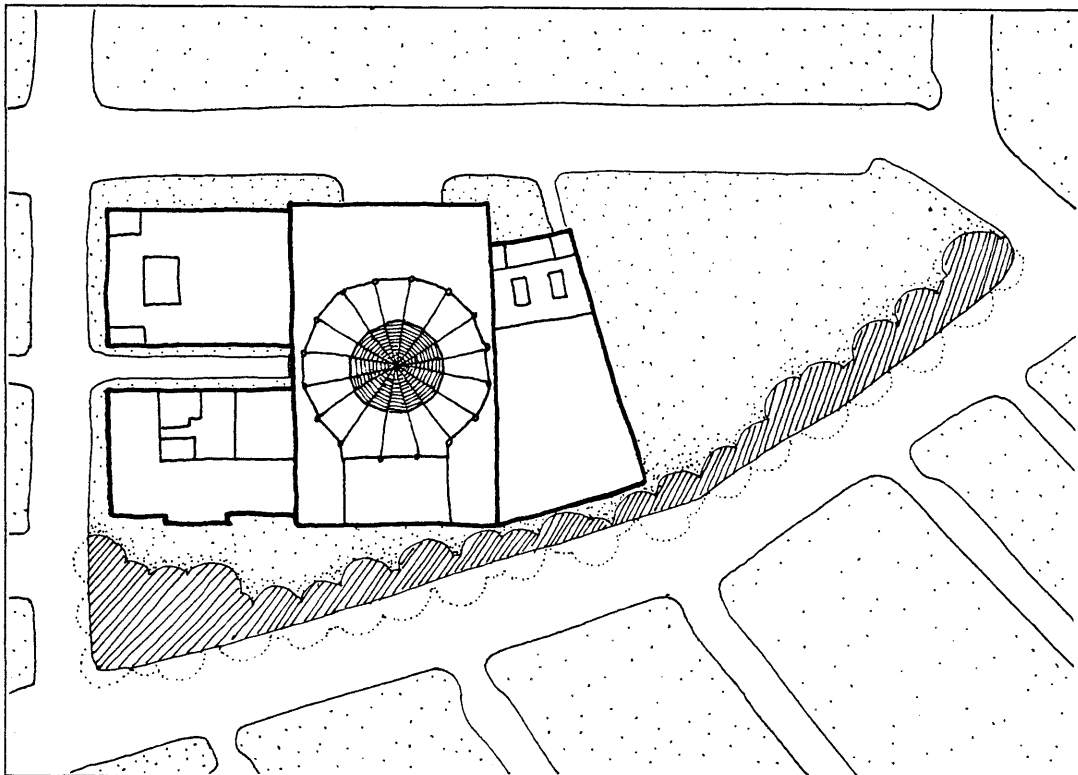
Boston receives a high average of rain annually. It is uniformly distributed through the year and there is no considerable variation from year to year. Rain is an inevitable changing process and usually impedes activities in open public spaces. On the other hand it can provide a quality of sound and movement that

could enhance a design. Because of its inevitable conditions this type of cyclical change could be enhanced by creating sheltered places to "sit in the rain." No such outdoor shelters exist on the site.

In addition, running water and snow are other components that can stir the emotions of public space users. It seems that a difficulty exists for enhancing cyclical changes because people must be protected but at the same time they should be exposed in order to experience them fully. The site's present conditions do not allow people to be in a close comfortable contact with these types of processes.

There is little vegetation in the site, except from a few regular trees in bad condition and a large planted but isolated area. Almost no perceptible vegetation exists in the winter. The floor surfaces of the exterior spaces are covered with

Existing landscape elements

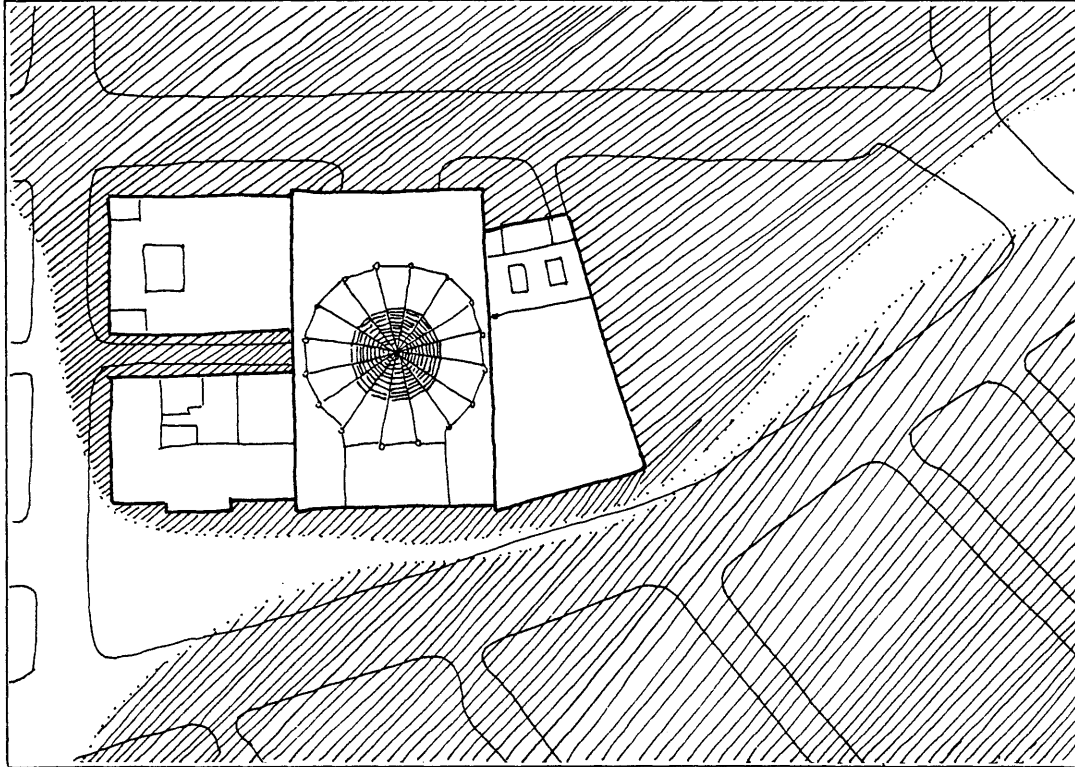


brick and concrete on the sidewalks. The changing condition of brick and other materials is not perceptible. No visual impact results from the way in which the materials weather and wear with use. The variability of materials and landscape components with respect to time of day and season is not evident on the site.

The wind coming into the square is channeled by the streets to some degree. No protection exists for exposed areas. The wind on the site blows in the same direction as the regional wind flow. The buildings change the wind's direction by bending it around themselves, but do not affect it radically. The wind on the site blows in the same direction as the regional wind flow. No intentional transformation process, where wind is used as a natural force, takes place on the site.

As discussed before, the inevitable cyclical changes are not the only type of

Wind diagram



changes that would occur on a site. Secular changes will also form part of the future of the site. The range of secular man-made change components that could be manipulated or transformed in an outdoor public space is extensive. Only a limited range of categories of relevant design components for a space like that of this study has been evaluated.

Signs and artificial light components could be used to inform site users about rules, occurrences, and activities of various kinds. On the site the use of these components is limited.

Artificial light can enhance the quality of the environment in more dimensions than safety alone. There are light sources which produce quality light with nearly as much efficiency as the existing mercury vapor lights on the site. Light elements on the site are spaced along the street and presently are utilized only to allow people to get around at night with some minimum standard of visibility and safety. In addition, the artificial lighting has not been used as an expressive element that could recreate the character of the existing historical buildings on the site; neither has it been used to inform about activities and changing processes occurring in the interior of the buildings.

A limited number of signs are used to inform about the events that are taking place in the interior of the building. Most of the sign displays are fixed and not flexible enough. A potential for increasing the number of signs and information systems on such a site should not be overlooked in the decision making process where time and change will be the guides.

The uses of non-spatial ephemeral special effect components that could transform the way the site is perceived are extensive. Vapor, laser, smoke, and other ephemeral elements could change the perception of the block dramatically. The difficulty of utilizing these components relates to the cost and effort

involved in the creation of these effects. Because of its location and art-related importance, the site could become a permanent activity node for city-level events or festivals, like First Night and Summerthing. If that is the case the feasibility for these types of interventions would increase.

On the site a massive renewal scheme that will require large-scale rebuilding and major shifts in the pattern of circulation will be costly and will take many months to be accomplished. On the other hand, the additions and demolitions component will impact strongly on the function, purpose, and perception of all the open public spaces on the site. It is problematic to predict long-term built form transformations on the site, but these types of changes will probably occur since the Boston Ballet Company may expand and the National Theater may reopen. In addition to future expected expansion, there is limited public transportation to the site. Yet it is located near an easily accessible node of activity: Copley Square. The link between these two nodes is now weak and undefined. These conditions might indicate future building additions to the site. Subsequently, a new parking structure, garage, and group of artist studios, as well as a series of open public spaces, will form part of the time program for the block.

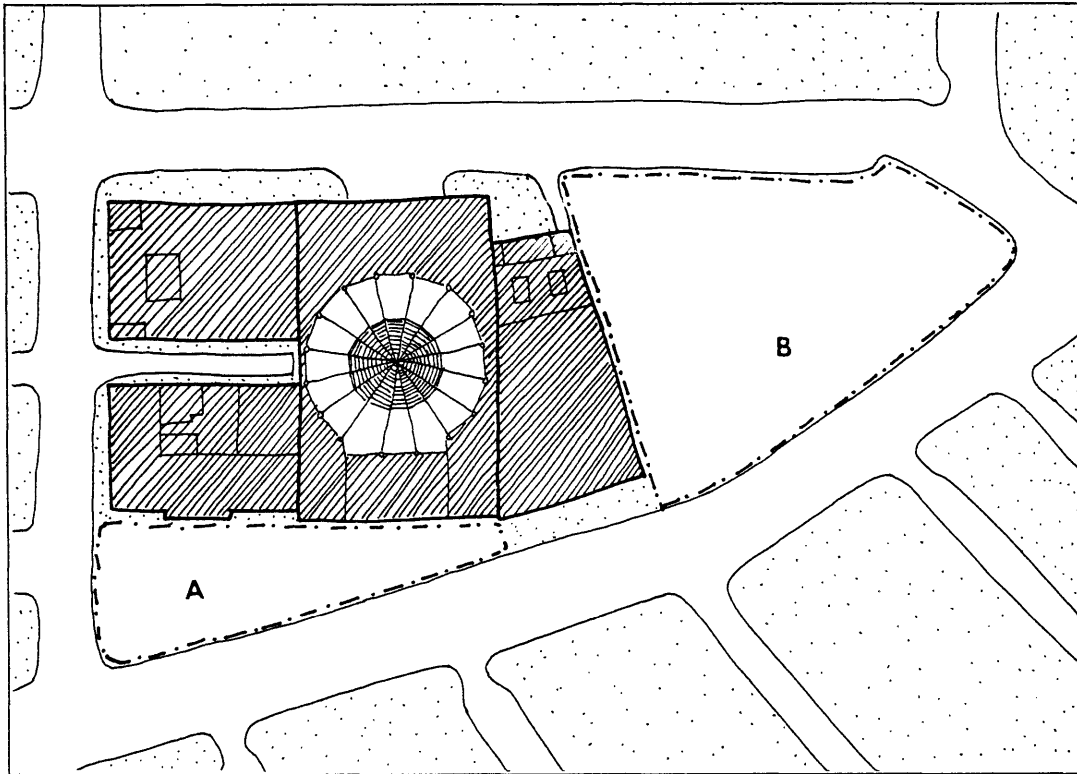
Public spaces, in order to support a series of activities, should be designed with a time-change performance criteria in mind -- the third task. The selection of these criteria has been based on the identification of certain time-change qualities that constantly appear on a group of distinct public spaces studied in previous chapters of this investigation.

Among these qualities, three appeared to be more closely related to time-change parameters: variety, legibility, and flexibility. Frequently these sets of qualities are guidelines for urban designers. The difference in the design process of the experiment that will be explained and illustrated in the next chapter is

that these criteria have been pursued both in terms of space and time.

Variety is the ability of a public space to offer a choice of stimulant and informative experiences. It is usually interpreted in terms of physical elements, like facade elements or surfaces, but could be defined in terms of an intangible component such as time. Variety should imply richness and complexity, contrasts in space and time. People should be able to experience and choose among a series of different happenings at different times of the day or year. Variety on the timing of events should be an aim in spatiotemporal design. The appeal of an outdoor space is enhanced by capitalizing on the time–space variety that changing processes bring to the place. A variety of experiences results from public open spaces with differentiated forms, uses, and meanings open to the flux of time—not a static and fixed set of varied physical elements, but a dynamic system of changing activities supported by physical elements. Changing activities are the result of the interrelation of different uses, physical forms, and people. In addition, time–space variety is one of the underlined qualities in Tuan's writings about time and change.

Legibility is a strong concern for Lynch. Space–time legibility is the ability to understand the function, layout, and purpose of an environment over time, in this case a public open space. Potential legible elements or symbols in an environment can transmit information about what should be the expectations of users of the space in terms of behavior, such as circulating, entering, and exiting. But environments will always change and their use or meaning could also change. Consequently, legibility elements do not need to acquire a static appearance or function. The legible components of a public open space could be transformed as a reaction to a change in activities, conditions, or times in the space. Existing or created changing markers or symbols in a public space should play an



Site

informative role: helping people become aware of the choices offered in a space at a certain time.

Time-space flexibility is the ability of an environment to be transformed and used for different purposes at different times. Flexible public open spaces should contain the physical elements and configurations that will enable changing conditions and activities to take place. This type of space should feature a framework of physical elements that are adaptable to a series of changes. Flexibility should not involve costly and long processes of transformation. Changes should be easily done, but with a purpose in mind. Flexible does not necessarily mean empty or undefined. When reflecting on the flexibility quality of an environment, we should have in mind a series of probabilistic and certain changes that could occur in the space. This selection will allow the designer to

create conditions that enable selected processes of change to happen on the site. A public space should not readapt itself to accept an innumerable set of changing processes on any conceivable time. Flexibility implies limits and choices. With a set of desirable change processes in mind, a flexible framework for change could be designed and implemented. In the next section a future scenario guided by time and change will be illustrated and described.

FUTURE SCENARIO

A future scenario for the case study will result from several interventions in time and space on the public open spaces of the block. The basic cyclical—secular change components that have been previously defined will be combined into scenes where they will be enhanced or displayed during relative short periods of time like the night and the day. A series of subsequent scenes will be integrated into scenarios that will represent longer periods of time. Two different scenarios, winter and summer, and two different scenes, day and night, will be the time limits for the experimentation on the site. This selection of the time limits is based on two different concerns: the climatic conditions prevailing in Boston and the desire to focus on fewer design variables in order to reach a certain level of detail in the urban design proposal.

Each of the components and scenes can be displayed on three different frames of physical components that conform to the studied public open space. Public open spaces can be fragmented into setting enclosure and sky. The setting is the open area or floor of the square and the exterior open spaces. The

enclosure is the surrounding structure that delimits the space. The sky above or ceiling of the open space is the visual boundary that, although of purely imaginary character, confines aesthetically the space of the square and the open spaces of the block; just as definitely as do the surrounding buildings or pavement. For each of these fragments a change process display will be proposed in the context of the different scenes and scenarios.

Before describing in detail each of the different future time–change scenarios for the Boston Center for the Arts and its adjacent public open spaces, it is pertinent to describe those elements that will remain constant along the selected time limits or scenarios.

Two different open spaces have been studied inside the block. One is the former Montgomery Square, which will be renamed East Square. The second and larger one, a former parking lot and a setting for a group of deteriorated buildings of no historical importance, will be renamed West Plaza.

East Square is triangular in shape. Its setting or floor surface is elevated above the street level, creating a new territorial space that allows access at level to several interior spaces of the Boston Ballet Company. Three different groups of stairs indicate access points to the square. The edge between the elevated platform and the sidewalk functions as a planter as well as a water channel. It has the exterior appearance of a stepped wall where people can sit under the trees planted along Tremont Street. The wall separates pedestrians and traffic from this elevated sitting area. The line of trees frames the entrances and protects the space from northeast winds.

Located in a focal point of the setting and covered by a transparent light structure is the kiosk. The position of the kiosk coincides with the directional axis of two radiating streets; thus, it becomes more visible as a potential change–time marker or symbol for East Square. A path between the structure that covers the kiosk and the facades of the buildings is left uncovered, serving as a permeable connection between interior and exterior spaces and as an exhibition corridor for artists and residents of the center.

The triangular area, covered by a light transparent structure, functions as a cafe or as the entertainment related zone in the complex, perhaps as winter

garden. This structure will increase in height towards the corner and will address certain visual reference lines in the facade of the existing buildings. This increase in height will occur in the floor as well, but to a lesser degree. The intention is to strengthen the visual impact of the corner and the position of the kiosk.

A space is carved from the elevated platform across from the entrance to the Cyclorama building. Eventually the Cyclorama is the building most frequented by the public during day and night events. A small fountain is positioned to the side of this space. The fountain is the ending point of running water from the channel.

The enclosure of East Square is mainly comprised of the existing historical buildings. The Cyclorama building, the Boston Ballet Company, and the National Theater will remain as time-anchors of the place. Their presence in the streetscape of the South End will be strengthened. The facades of these buildings are not physically altered, though they are given a new appearance at night by means of artificial light fixtures in the square. These are designed with the features and ornaments of the buildings. The lamp pools on the street will change as well. The neighboring streets and a series of deciduous trees will complete the enclosure of the square.

The sky of the square is covered over where the cafe is located. The roof is transparent and permits a closer visual and sensual contact with different cyclical processes of change that occur throughout the year.

The West Plaza is considerably larger and is surrounded by streets to the north and south and by the high wall of the National Theater to the east. The inclusion of a large parking facility in this part of the block creates opportunities for the display of processes of change. The parking garage is not an underground

structure because of the prevailing soil conditions in the South End. The structure is three stories high but is designed in a way that is not perceptible as such from Tremont Street. The building reduced its capacity as it goes higher. The reason for this is the desire to create a setting where transformations, both cyclical and secular can be observed; the parking garage works as an amphitheater as well. The introduction of an amphitheater in the block is compatible with the theme of use for the site that has been constant through the years: entertainment.

Because of the circulation system in the interior of the structure, the access ramps are located in the exterior of the building. Being semicircular in shape and located on a strategic corner, the movement of vehicles is perceptible from a long distance both day and night. A small outdoor seating area shaded by trees will be located near the ramps. In this area an important change-marker will be located: a screen. This screen will function all day long and will become the main source of information for the activities and events that take place in the interior of the center.

The exterior appearance of the amphitheater makes the parking structure less obtrusive. Besides, the amphitheater provides an opportunity for the perception of different activities that take place in the lower part of the plaza and on the stage. Because of the angle of inclination of the steps, this area takes advantage of the change in the angle of the sunlight during summer and winter. The surface of the steps absorbs more heat during the winter.

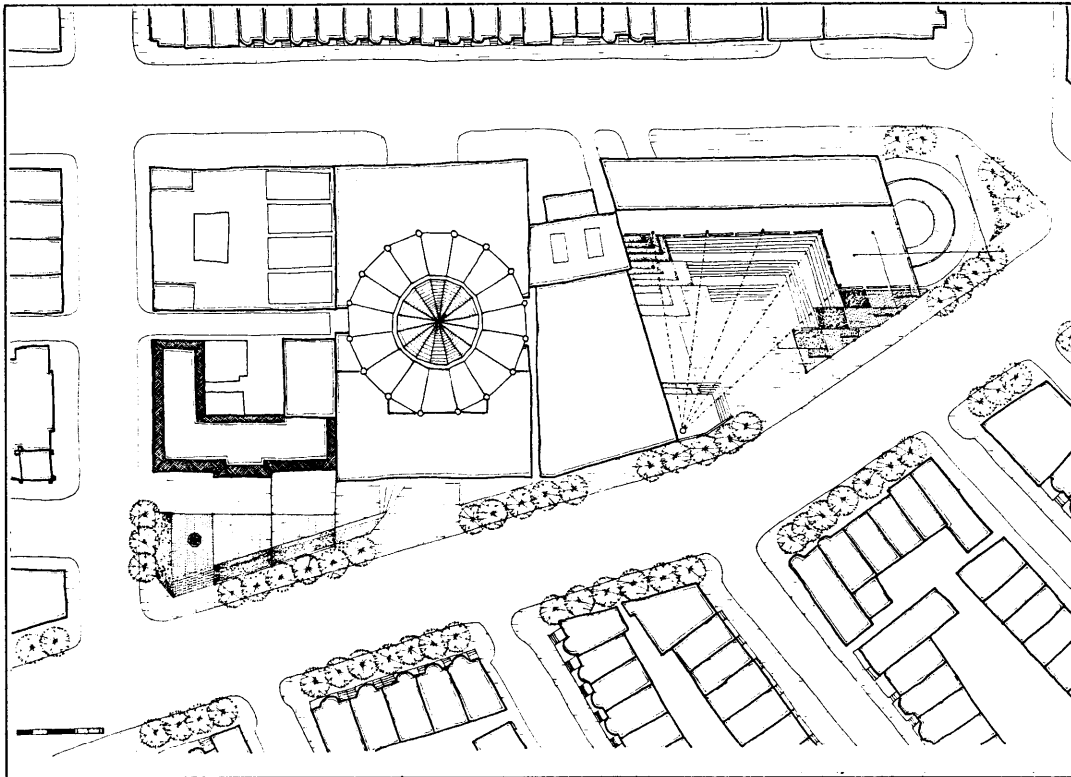
The lower part of the amphitheater functions as an exterior foyer for the National Theater and as an arena for different kinds of entertaining, displays, or events. The space is set up to support activities both day and night. A stage forms part of this area. Opposite to the stepped terraces, the stage also serves

as an entrance to the National Theater, connecting the new parking garage with its interior spaces. At present the area across the street from the entrance of the theater is very reduced space and not functional. A new entrance to the theater would ameliorate the problem of congestion before and after an event.

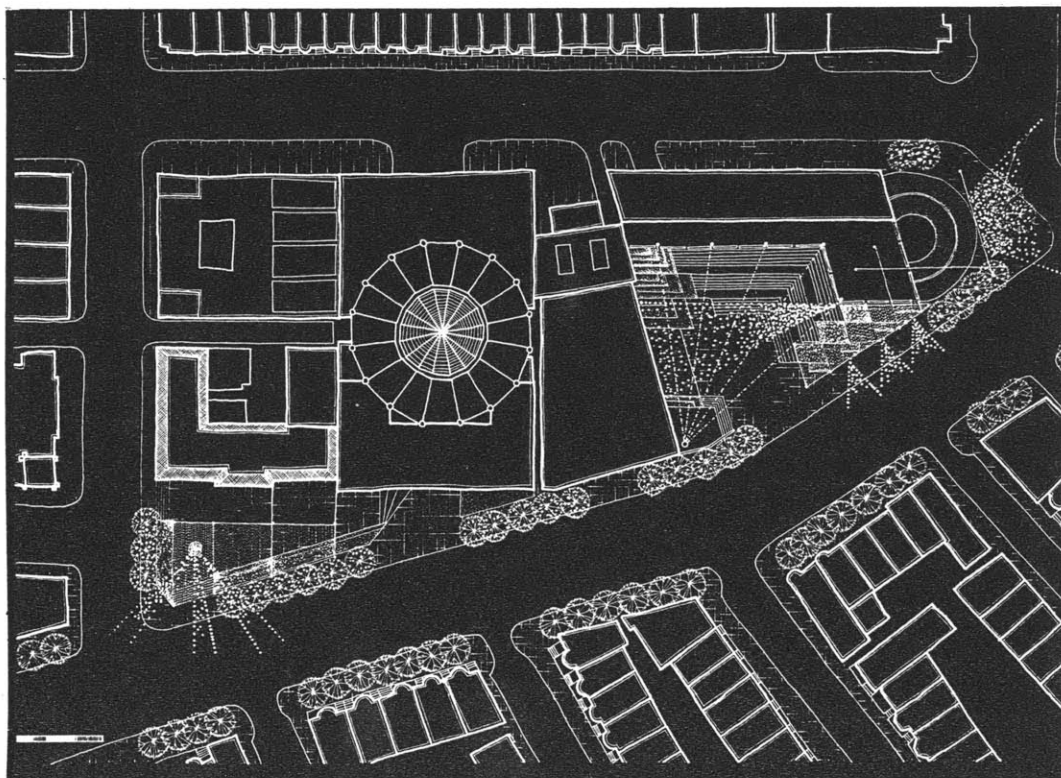
Two different physical systems frame the amphitheater. Both of them are located at the ends of radiating streets adjacent to the block. On the side and adjacent to the National Theater a cascade is situated. It follows the angle of inclination of the stepped terraces and introduces noise and movement to the space. The cascade ends in a small fountain in the lower foyer. At the other end, the one aligned with Tremont Street, a system of screens, terraces, and stairs become part of the complex. A series of terraces connects the street level with the roof of the parking garage where artists' studios and a large terrace are situated. The terraces are covered by a transparent light structure. This system is a permanent focal point, an all-year around winter garden where flowers are sold. This type of activity makes reference to the past of the place, for the Flower Exchange company occupied the block for several years.

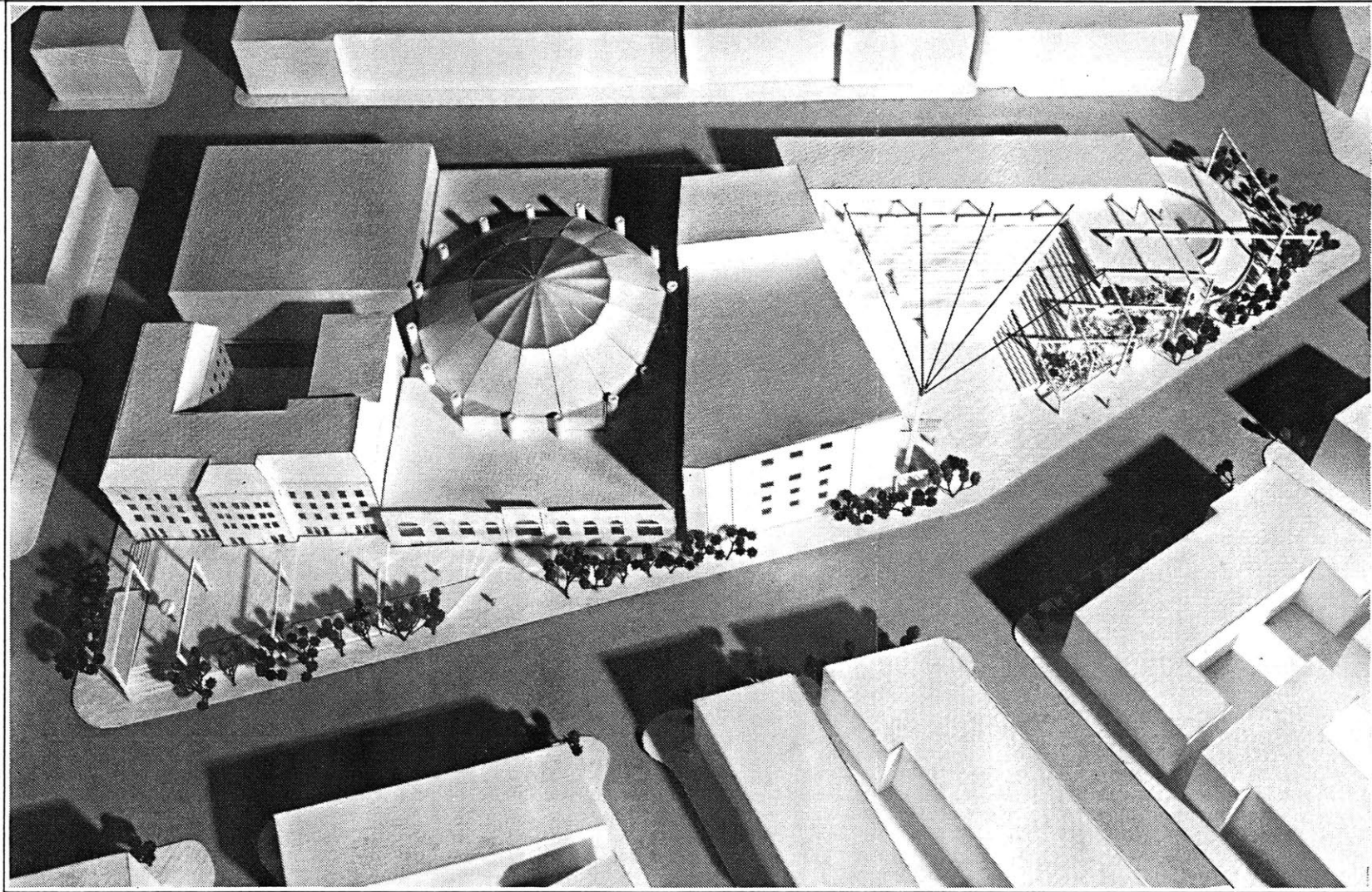
The amphitheater is covered by a cable structure that protects the space with different environmental moderating devices that go beyond functionality producing a shadow-light play of changing patterns on the steps and in the foyer. The angle of inclination of the cable structure matches that of the National Theater. The structural pole that supports this roof becomes a solar clock because of indications about time of day that are designed on the surface that covers the shaded lower foyer.

ROOF PLAN DAY



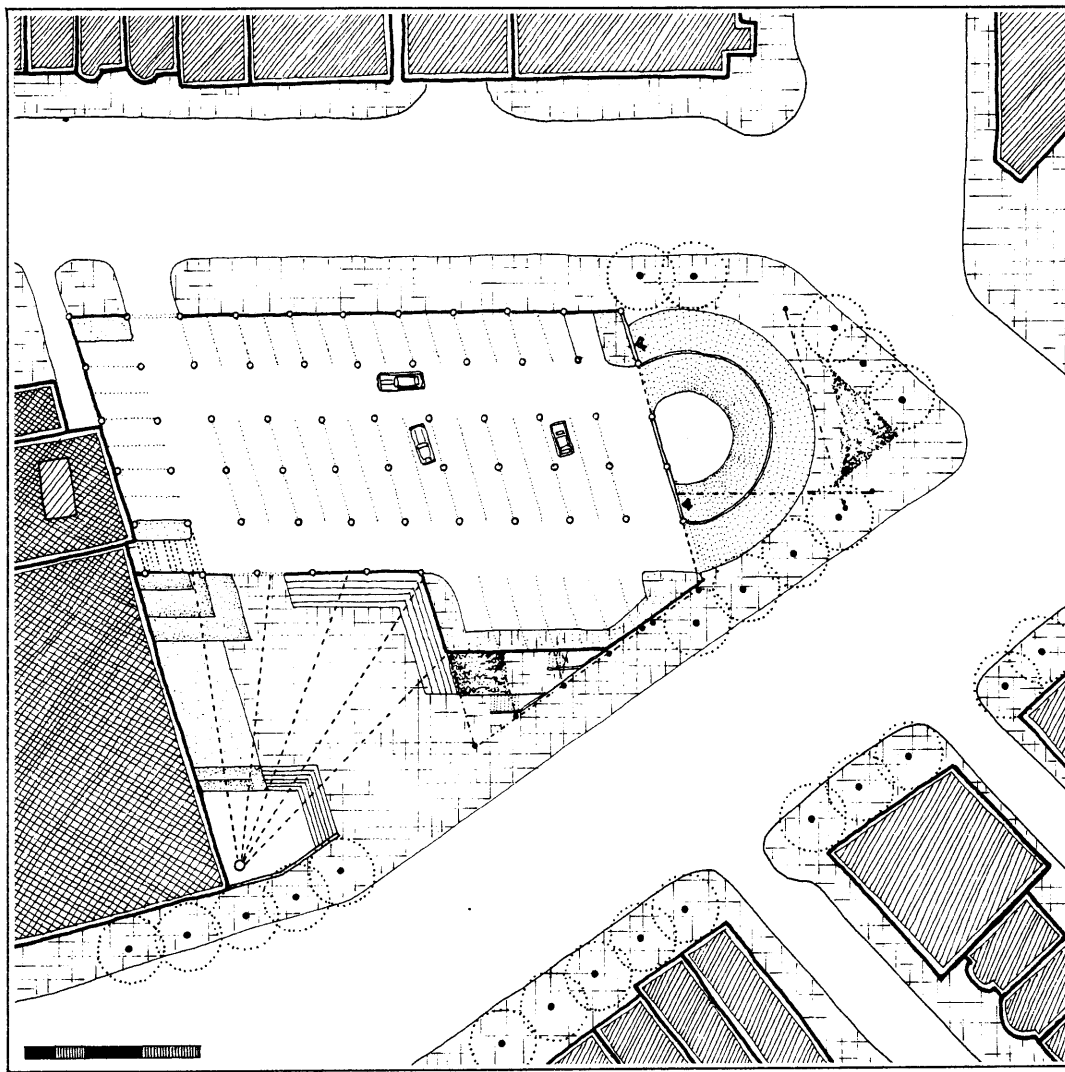
ROOF PLAN · NIGHT



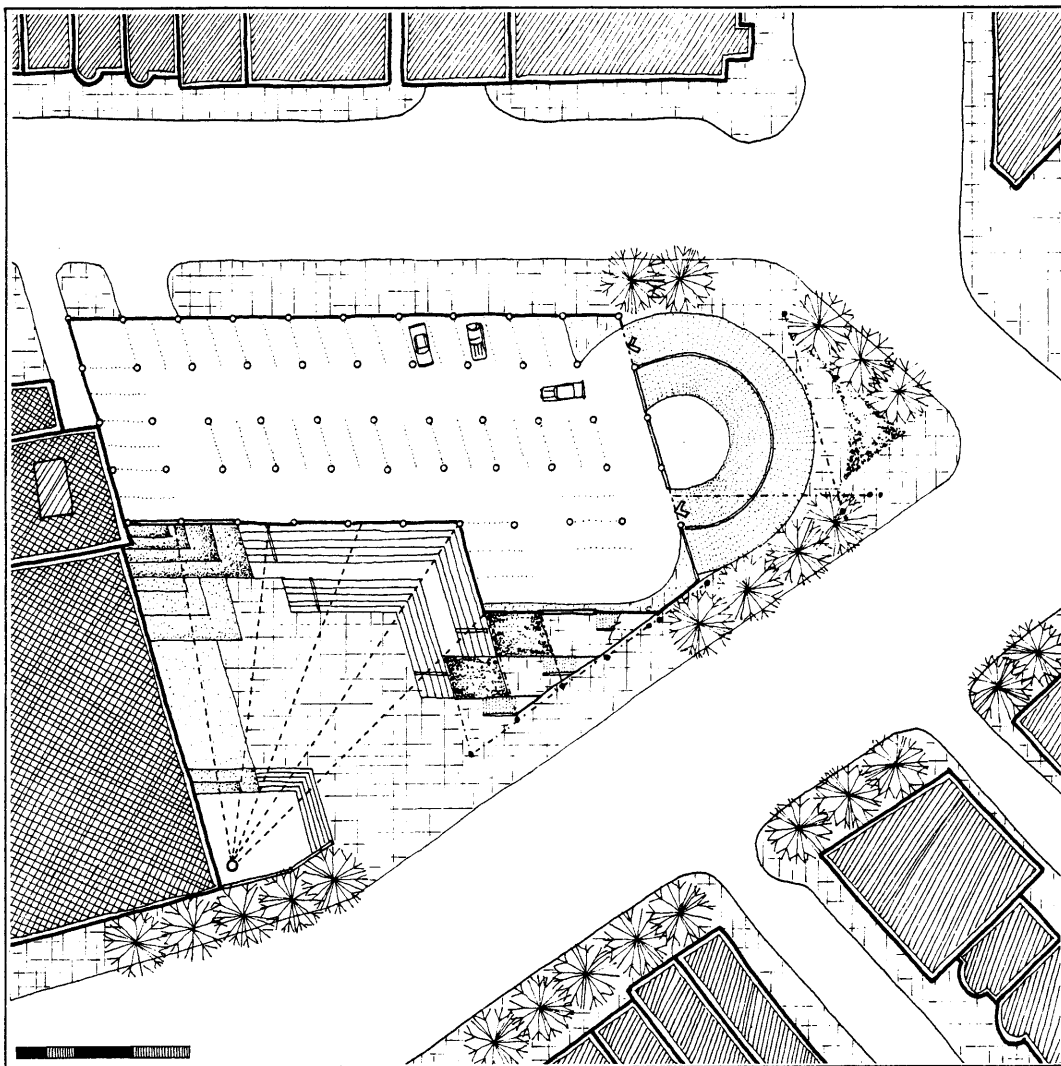


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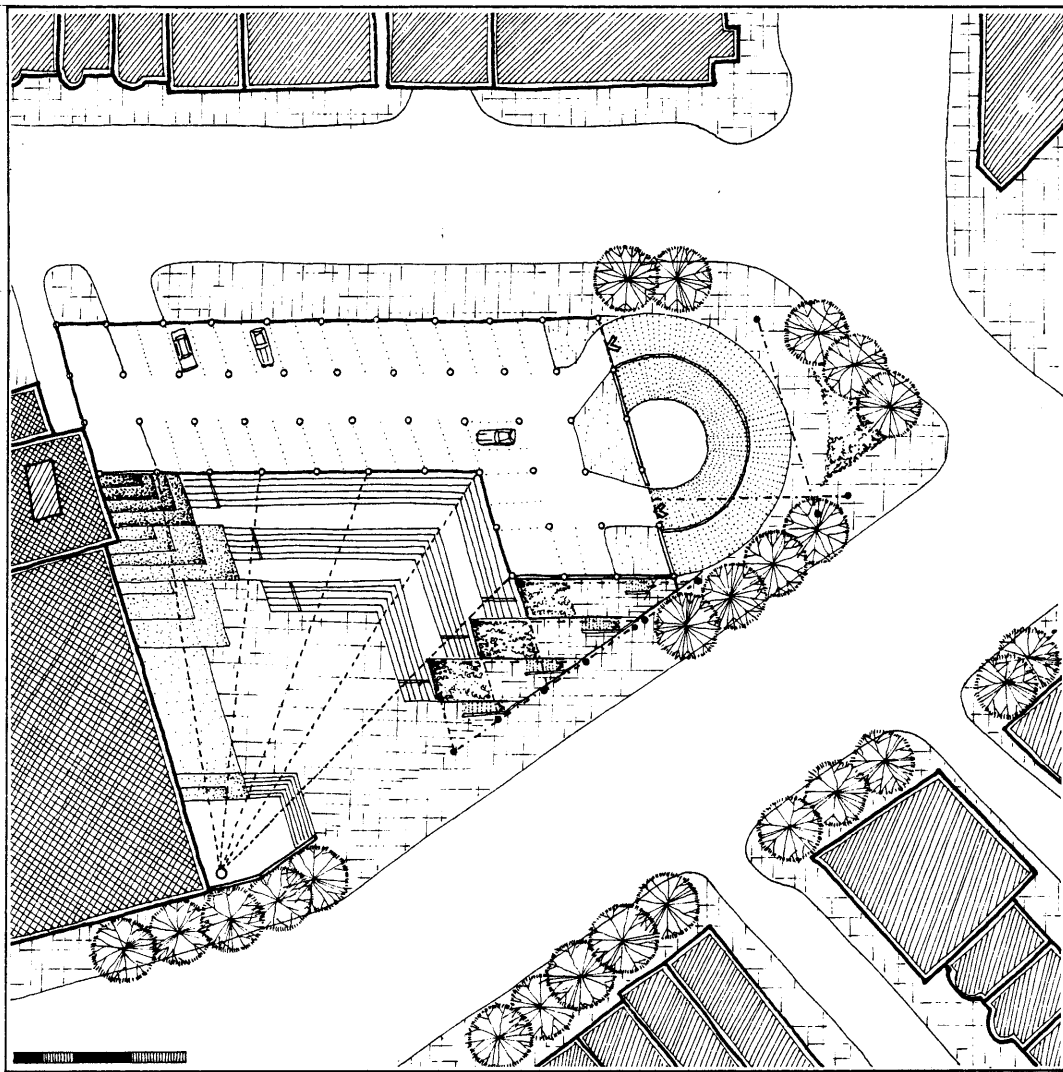
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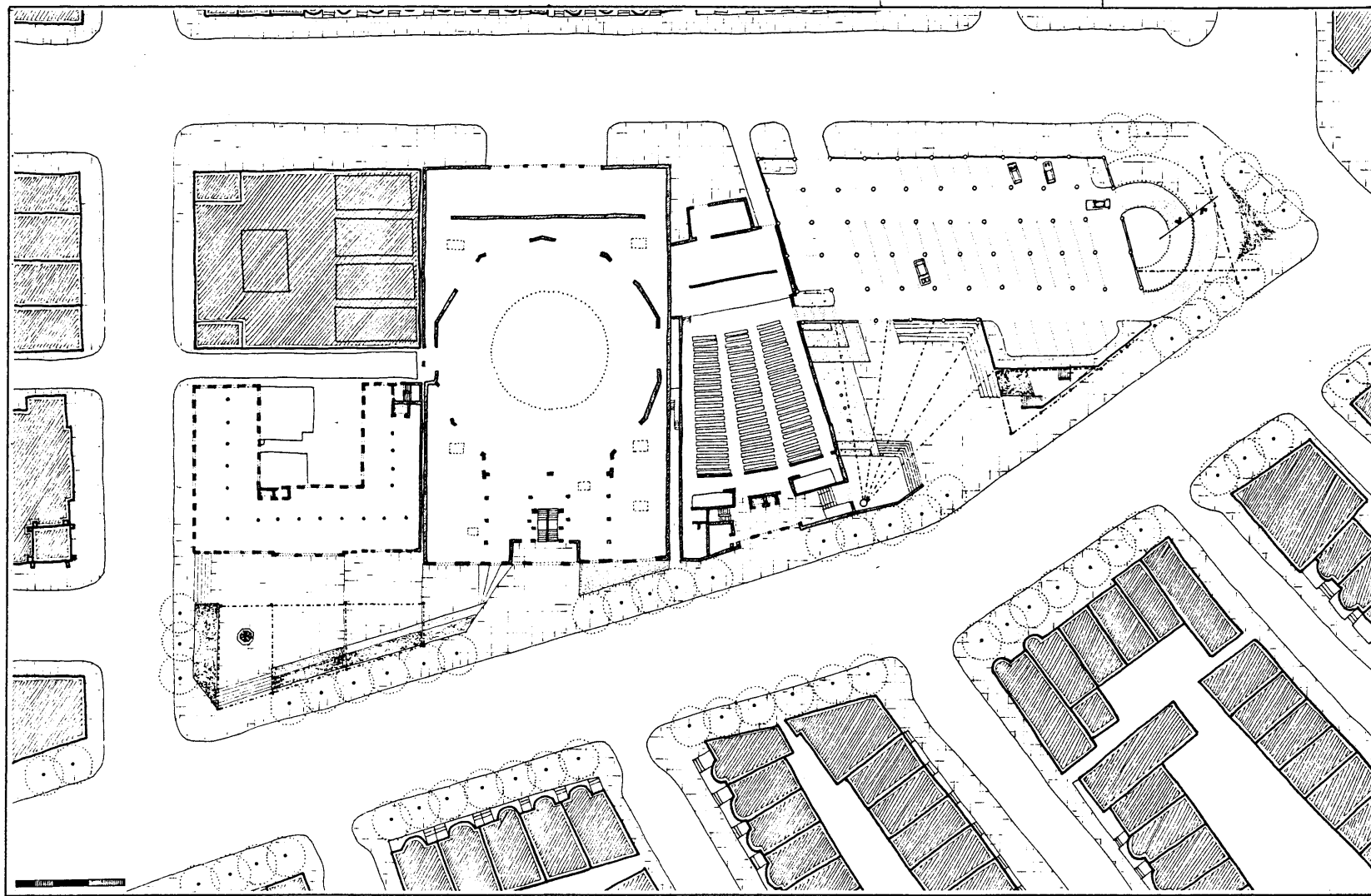


PARKING 2

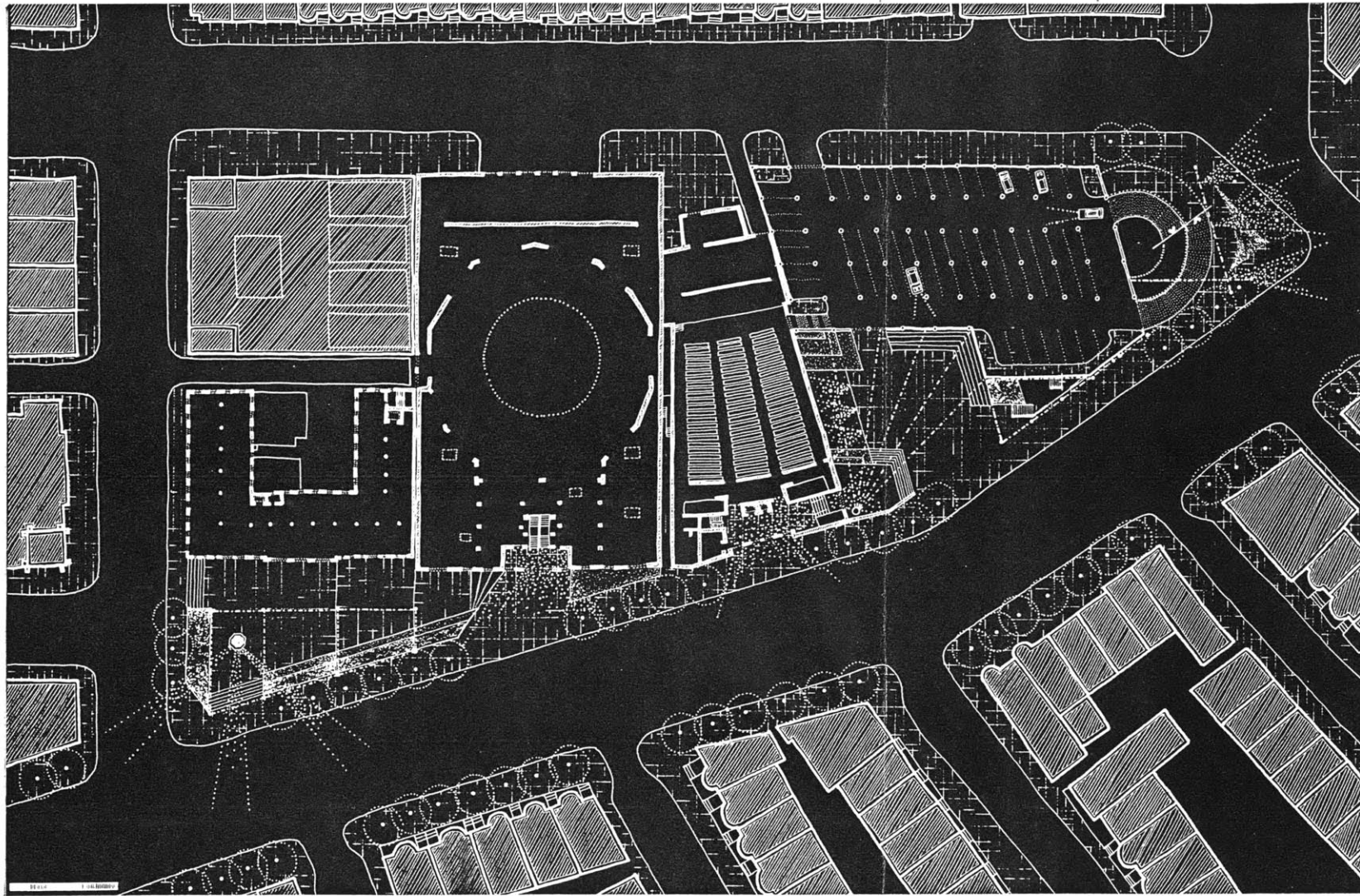


PARKING 3





DAY
PLAN



NIGHT
PLAN

After enumerating the series of physical elements that facilitate selected processes of transformation and change on the site, it is relevant to explain how these processes and related activities unfold in time. Both open spaces are described in terms of winter, summer, day, and night.

East Square during the summer is a place where visitors to the Center can gather day and night. The covered area or cafe is open late. Its schedule, a counterpart of the one of the center itself, allows visitors to enjoy it before and after artistic events and exhibitions. In addition, an exterior art exhibition gallery forms part of the cafe area. In the summer it is installed along the path between the facades of the historic buildings and the new proposed cafe.

The kiosk, installed in the interior of the cafe, functions as a change-time stand. It is used as a ticket selling station during certain hours of the day. It also functions as an information booth and as a food exhibition and selling stand. The transparent structure that houses the cafe along Tremont Street is shaded by deciduous trees. The foliage of the trees becomes the visual roof of this area; the effect is especially dramatic during the fall. Because of its orientation the cafe needs protection on sunny days. These trees also shade the space between the cafe and the sidewalk. People are able to sit along this low wall where the planter and water channel are located. The running water produces a refreshing atmosphere in the interior of the buildings. The planter, because of its elevated position, is perceptible from far away. During hot days the openings in the changing levels of the roof are used for capturing the wind that blows in that direction. Banners also hang from the roof, giving shade and producing a play of shadows and contrasts due to the sunlight.

But more than a summer space, because of its enclosed condition, East Square is a winter-spring place, a warm place. People in the interior cafe are

comfortable but at the same time are exposed to cyclical processes of transformation like snow and rain. During the winter, the color pattern in the interior of this area becomes brighter: certain features of the cafe are changed in order to contrast with the snow that accumulates along the path and in the street. These changes include tablecloths or the menus. The exhibition gallery shifts to the interior. The water is not running in the channel; pots with flowers of vivid colors take its place. The place feels warmer. The leafless trees during this part of the year allow the sunlight from the south to come into the space. During the night they are lighted with warm colored lights. The lights not only decorate the streetscape but illuminate the cafe.

During the winter the kiosk becomes a source of visual warmth. Because of its illumination it is perceived as a lantern during the night. During certain events, potent lights are installed in its interior. The rays coming through are perceived at the city level and the location of the center becomes more visible from a distance.

In contrast, West Square is more of a summer space than a winter one; making a balance in the use of activities of the open spaces in the center as a whole. The most prominent space in West Plaza is the amphitheater. Because of its size and purpose it is not fully enclosed. The stepped area is more usable during good weather. But, these conditions do impede the use of the space during winter, especially for recreational purposes. During the summer, this space becomes the arena where experimental singers and performers practice and become known. As mentioned before, one of the reasons behind the creation of the Boston Center for the Arts was the need to provide cheap leasable space for newly arrived artists in Boston. During the weekends visitors and residents of the South End visit the amphitheater where an on-going series of informal events

take place. This space is one of the few outdoor theaters in Boston. Because of the configuration of the amphitheater and the location of its lower stage, when not in use for performances its lower area becomes a path between the parking garage and a secondary entrance to the National Theater. This area also serves as a foyer where people are able to move about between on-going events.

While moving from one entry point to the other or resting after a ballet performance, people are able to experience one of the two different systems that frame the amphitheater. Water is running in the cascade with a rhythmic movement. People in the steps and elevated terraces are able to reach the water and the breeze on a windy day. During summer nights movies or visual images are projected on the high wall of the National Theater which becomes a natural screen. During the day, at peak hours of pedestrian and vehicular traffic, incoming events are advertised in the same manner and the center gets the publicity that it needs to attract new users and residents.

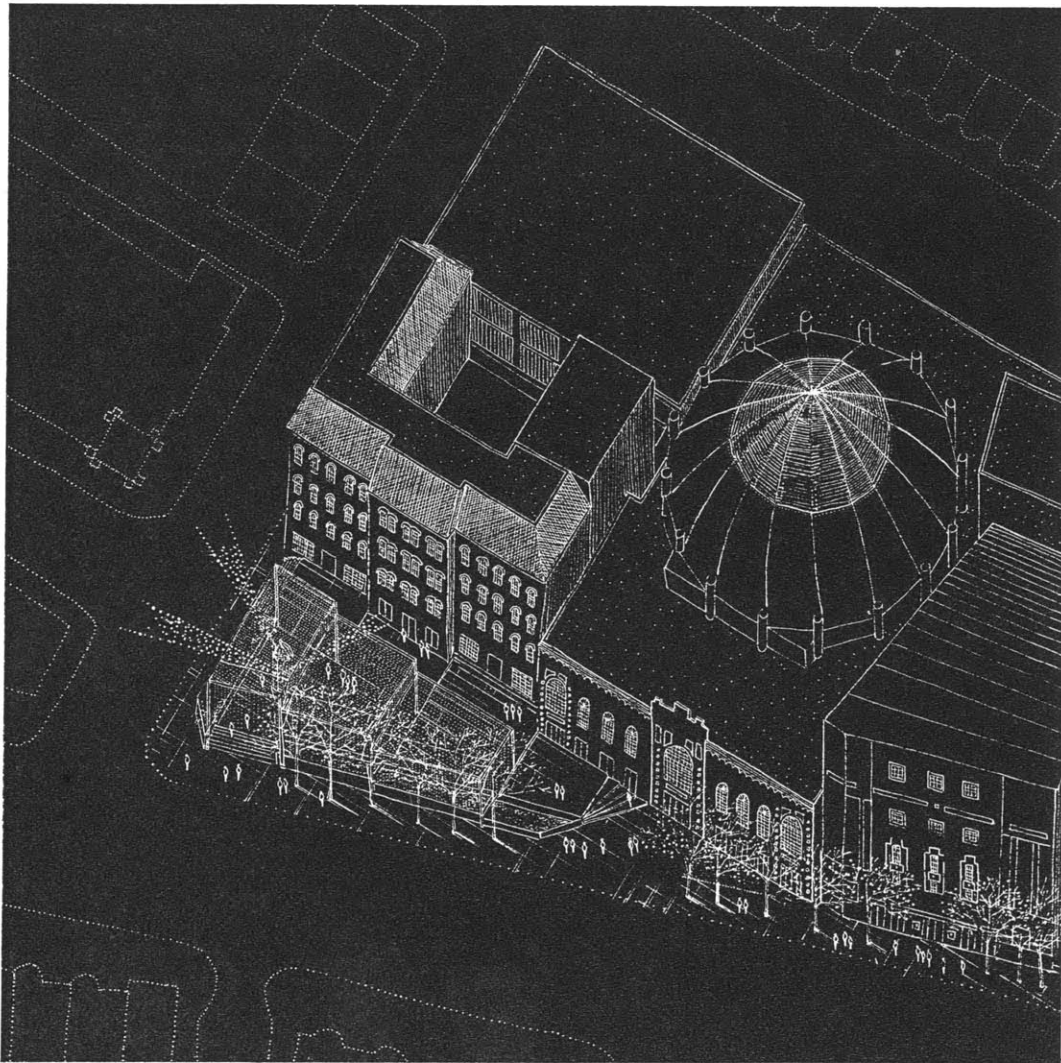
During the summer and spring the roof of the amphitheater is covered with bands that provide shade and semi-enclose the space. During festivals the cable structure is utilized for the display of balloons, pieces of colored paper, and screens -- ephemeral elements that move with the wind producing a kaleidoscope of colors and noise.

People move from the street level to the terrace on the roof of the parking garage where art exhibits take place. The framework of scaffolding components or screens is covered with bands that give shade to the space. During the night the screens are fully illuminated and perceptible from a long distance. Cars move from one level to the other. The outdoor ramps serve as indicators of on-going events in the complex. The screen near this area shows winter images, and the beginning and end of a ballet or concert is announced.

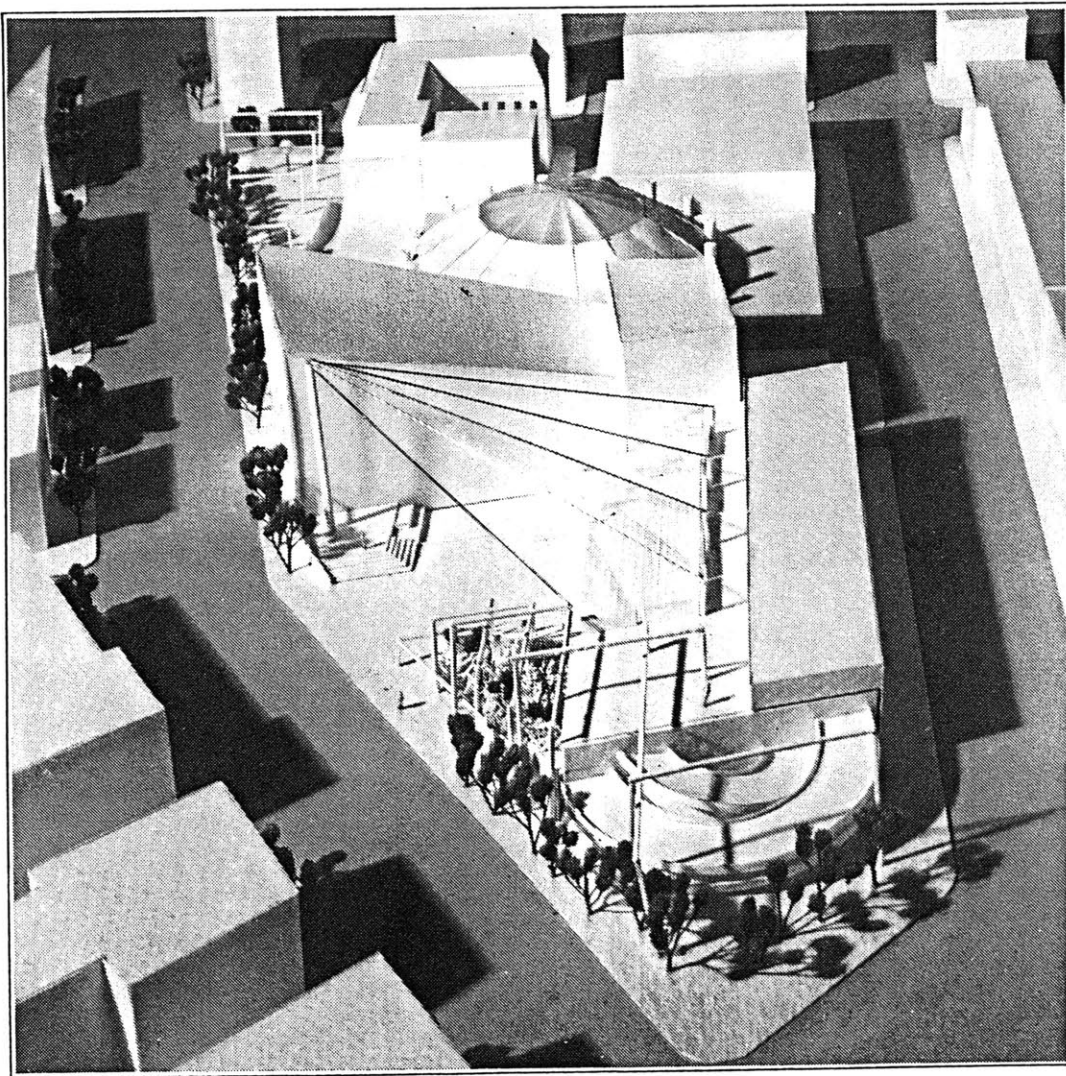
During the winter, when the amphitheater is not frequently used for performances and concerts, it becomes a recreational space. The snow accumulates in the steps and is maintained fairly white. Children are able to play in the snow, sledding from the third level terrace to the foyer area. During festivals or special events the elevated positions of the terraces serve as display platforms for ice sculptures that are fully illuminated with warm colored lights installed in the system of screens that are located along Tremont Street. The roof of the amphitheater is fully illuminated and the screen near the ramps projects summer images.

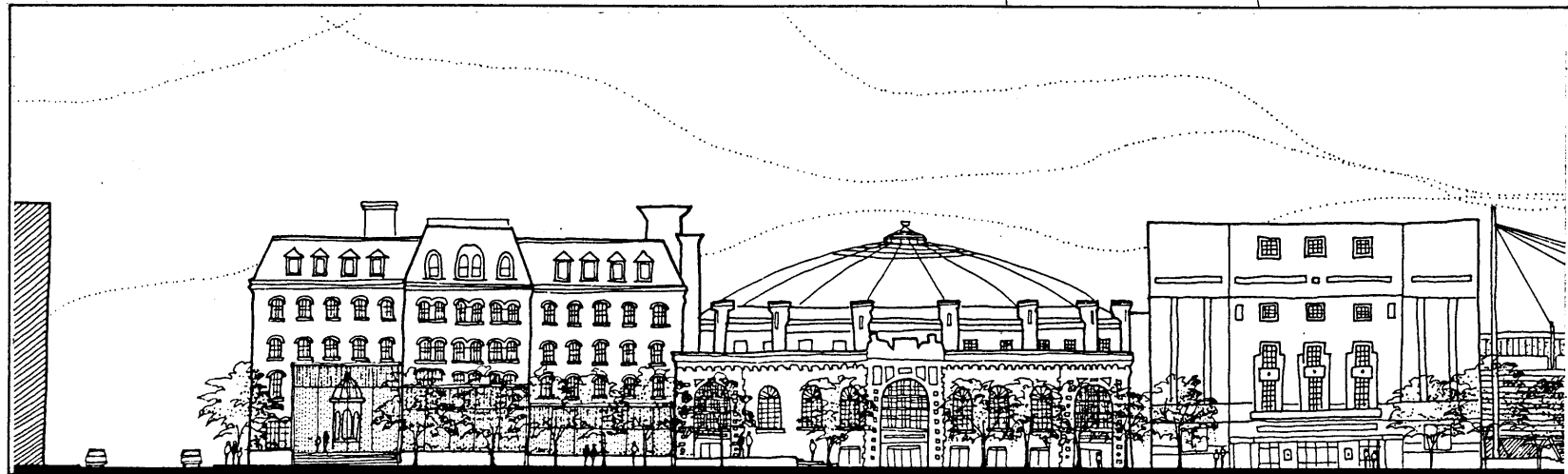
Having now completed the experimentation of site, the next section evaluates the results of the proposal for the Boston Center for the Arts in terms of process and product of an urban design approach guided by the concepts of time and change.

AXONOMETRIC WINTER · NIGHT

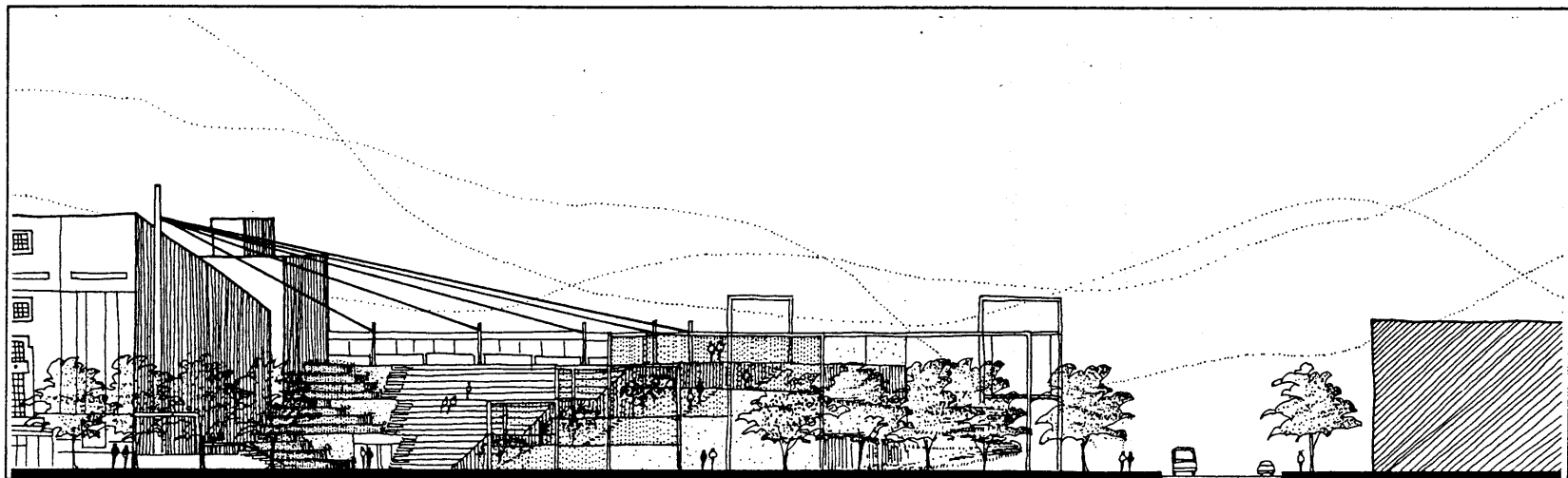


MODEL

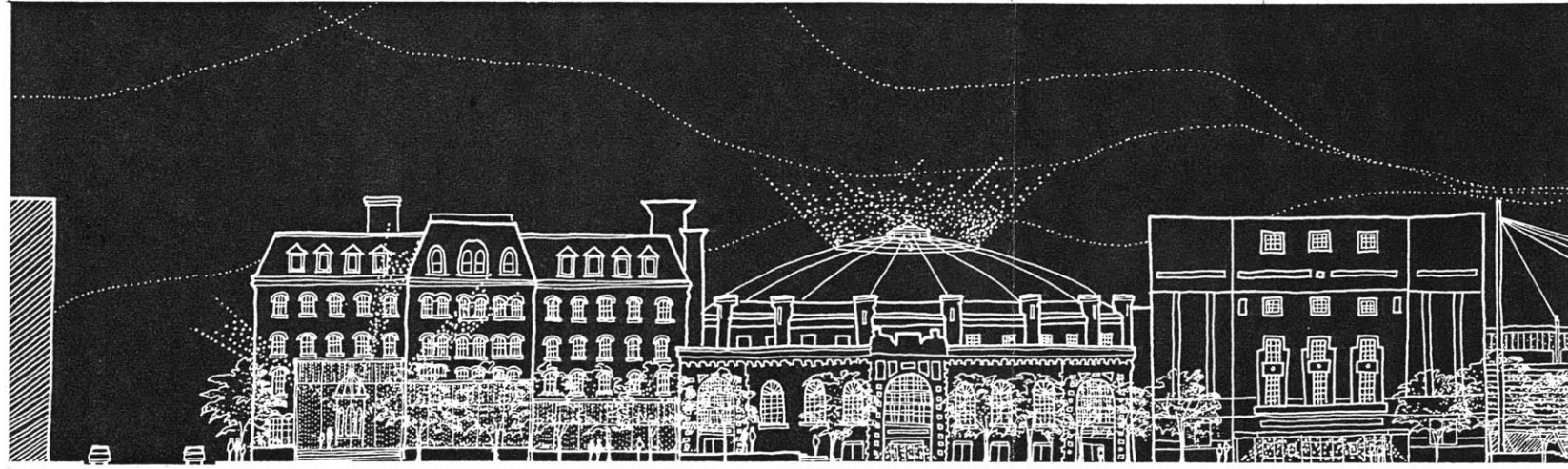




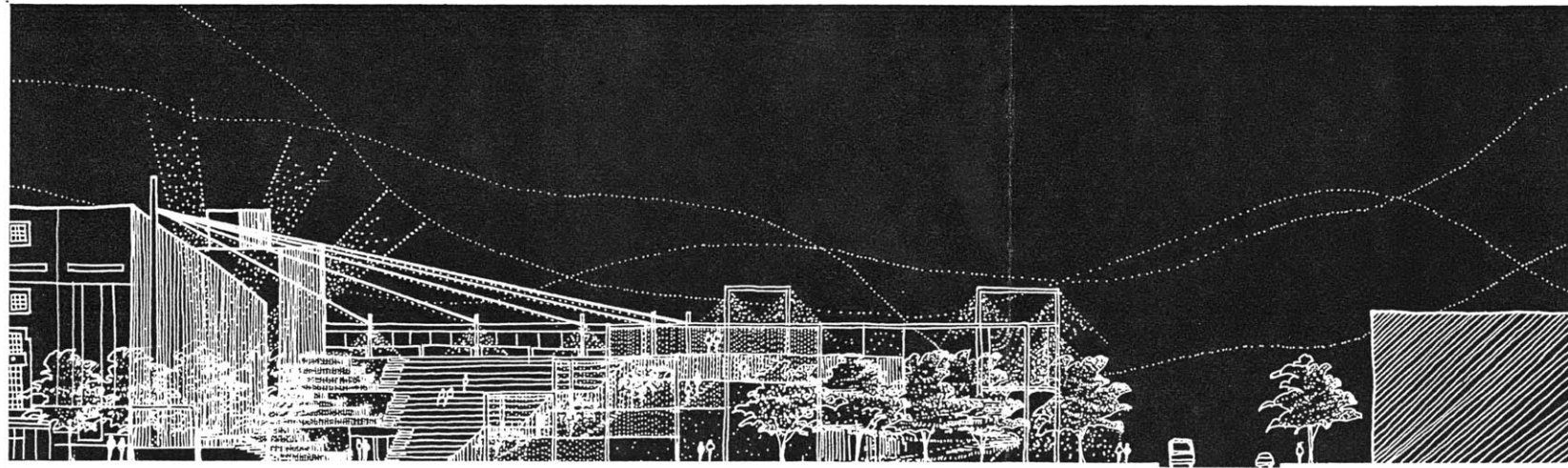
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DAY
ELEVATIONS 2

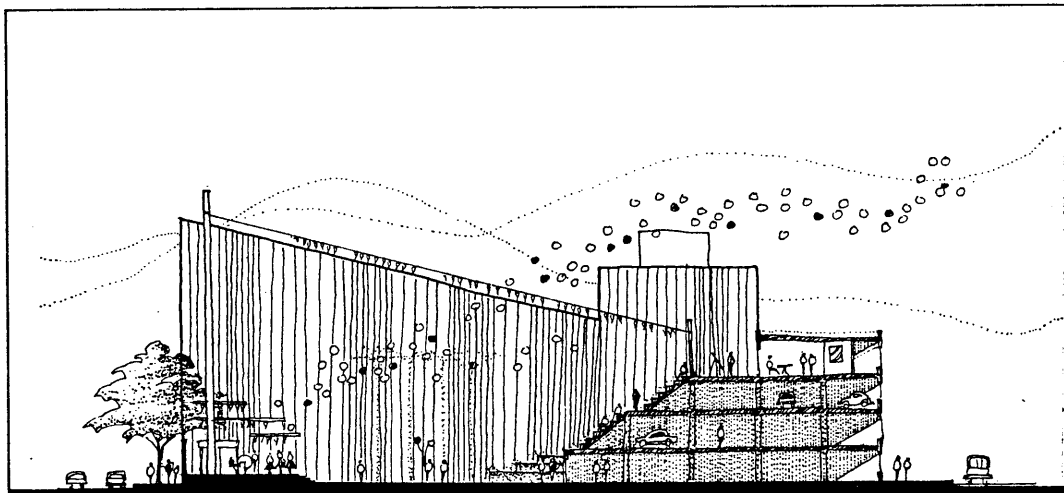
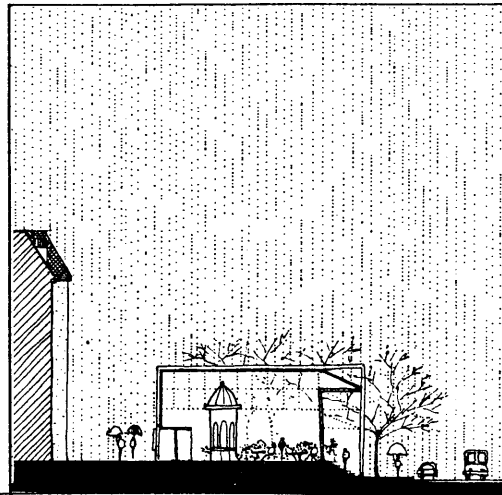


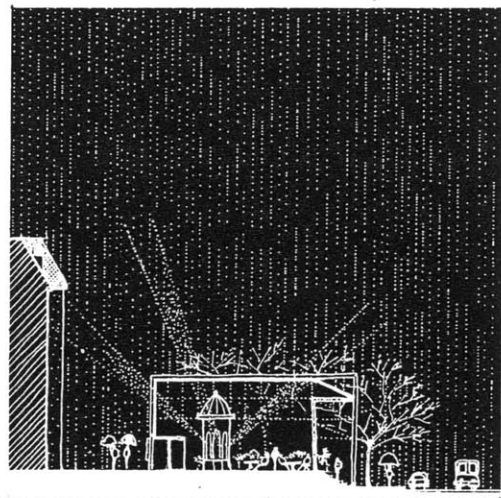
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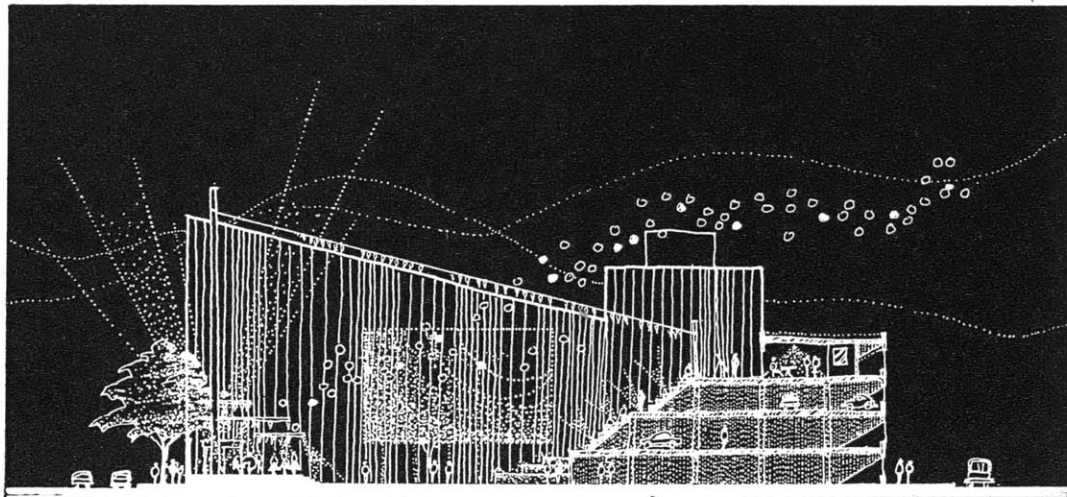
NIGHT
ELEVATIONS 2

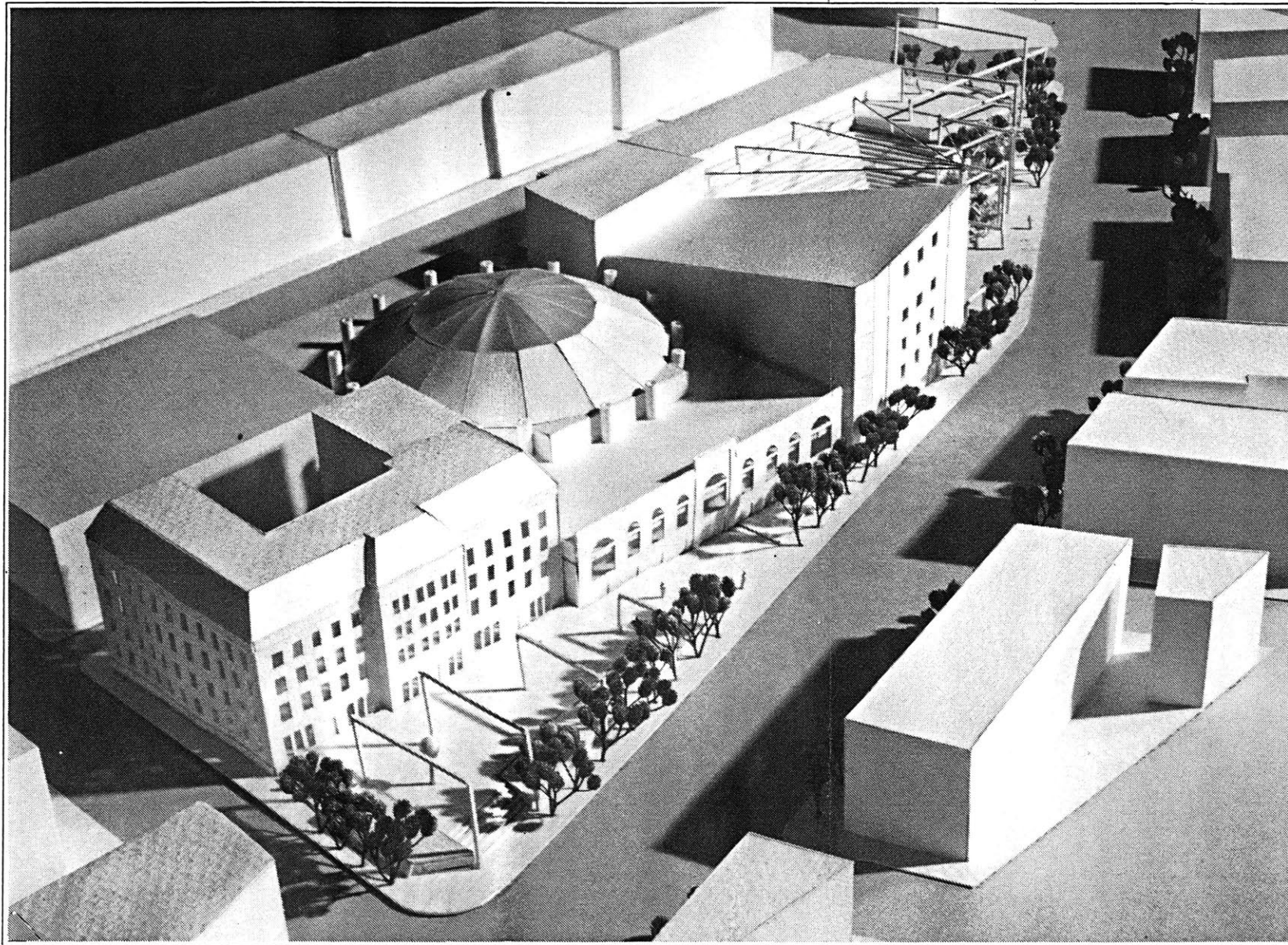
SECTION WINTER DAY
SECTION SUMMER DAY





SECTION WINTER · NIGHT
SECTION SUMMER · NIGHT





MODEL

3. CONCLUDING REMARKS

The intention of this thesis has been to explore the applicability of a design program using criteria derived from Lynch's and Tuan's time-change theories and from an experimental design for an open public space -- The Boston Center for the Arts in Boston's South End. In general terms, the intention was to understand how principles of time and change can play a role in the urban design of an open public space.

During the research for this thesis a checklist of urban design tools was developed into a secular-cyclical change list by classifying the different types of transformations that occur in an open public space. Using this list of alternative situations, the task of imagining what would happen in the future of a place became clearer and more tangible. This list of possible changes also served to focus and direct the designer towards a specific range of goals that included time as a design parameter. This list also helped in the organization of the design process.

The design decision-making phase followed a series of steps. Both past and present conditions of the site were analyzed in terms of changes and their implications over time. Changes and constancies in the past and the present conditions of the site gave clues about how to move into a better future. This process also helped the author to understand how a theme for the design of an open public space can reinforce the uniqueness of a space in the city and how this theme could be used as the basis for the design presented in this thesis. Ways in which information about the structure of activities of the Boston Center for the Arts could be better expressed were explored, such as those conveyed by changing components on the site. Thus, the idea that processes of transformation can work as means of public education was reinforced. Furthermore, it became evident that there was a need for a particular physical change framework that could not only function as a container of information and stimulation during special occasions of events, but that also serves on an everyday basis.

The issue of what role the design time-change criteria played in the process is important, because the content in which the experiment was undertaken includes factors other than those dealing only with time and change. In terms of physical conditions, some additional qualities of open public space design are influential, such as the scale and geometry of the space. Nevertheless, during the design phase it became clear that the potential for dramatic improvements of an open space can be achieved with minimal physical disruption of the environment. But first, a physical form and a pattern of use should already exist or be created to allow "small" time-change interventions to become more perceptible and thus stronger in the quality of information and stimulation conveyed. It seems that time-change details could make a difference in the perception of a place, but a broader framework of conditions is needed so as to convert these details into

meaningful experiences that could be evoked by the users when developing a spatio-temporal image of a place.

One of the limitations of using time and change as guiding principles was raised during the experimentation: the difficulty of measuring and evaluating a proposal, in terms of the performance criteria developed during the analysis of the present conditions of the site. Time legibility, for example, is not as easily measurable as are structural efficiency and functionality. Most of the qualities underlined in this set of design performance criteria are of an intangible and relatively unmeasurable condition.

Another constraint raised was the fact that open public spaces can only be transformed in a limited number of ways at different times. Most of the time it is infeasible to assume that this type of space could be fully used to the same extent during winter and summer or day and night, although this is the ideal. In such a case, a high cost in resources would necessarily be paid. An alternative could be to combined winter and summer microspaces into a large system of open spaces. This was the approach undertaken in the experiment: it seemed to fulfill a criterion developed during this investigation: variety in time and space.

Under certain circumstances it might be problematic to find the needed compatibility between the kind of concerns that have guided the design experiment with the ones that an urban designer would have to pursue if he were commissioned to design an open public space, like cost efficiency in the use of the space, which was not considered in the design decision process. This thesis does not pretend to imply that a design method could be developed based solely on concepts of time and change. It only gives insights on the potential that these concepts have in guiding a design by means of broadening the implications of design decisions in terms of time-change parameters. A new dimension was

introduced in this design process that helped in making more purposeful and relevant choices.

Finally, it is difficult to assure that the approach followed in this thesis could help other designers to successfully undertake open public space design. Many of the decisions in the experiment were made intuitively, and the validity of the results is uncertain in terms of how people would actually get involved and actively participate if the proposal became a reality. In contrast, the author is certain that having experienced a spatio-temporal design approach has broadened and enriched the range of his original ideas on how to convert an open public space into a memorable and useful space in the city. How these ideas will work in actuality can only be tested later on.

4.

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